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THE COVER

Earl Wallace of Eastman Kodak, Clyde Schlueter of Employers Mutuals, and Henry Lamb of American Standards Association stand at the entrance to the Conrad Hilton's Grand Ballroom and try to decide which of many interesting sessions in the program they should attend. Solution: split three ways, then get together later and compare notes.

38,800 copies of this issue were printed

National SAFETY NEWS

A NATIONAL SAFETY COUNCIL PUBLICATION

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EDITORIAL

At Your Service

BENEFITS from attending a National Safety Congress are many. Most conspicuous are the opportunities for increasing your effectiveness on the job. The week's programs are built around better methods, ideas, and products.

But there are other reasons for coming to Chicago for the week of October 17-21. Congress attendance brings a renewal of friendships, the relaxation of the trip and a refreshing change from daily routine. These secondary benefits can be valuable, too.

Among the more than 12,000 persons attending the 1960 Congress will be representatives of practically every major business, industrial, and professional group in the country. There will be specialists in the various branches of accident prevention, occupational hygiene, and health service, home and farm management, and educators from kindergarten to college levels. They will be eager to share their experience.

The Congress must provide something of practical interest to these various groups—all in five days. That means weeks of work for the several hundred persons who serve on program committees and national and sectional executive committees. The final program presents the contributions of a thousand or more participants, some presenting prepared papers and some speaking off the cuff in discussions.

For the beginner, the Congress offers a basic course in safety fundamentals. For the experienced safety man it can be a graduate or refresher course.

A safety man's first interest, naturally, is in the meetings of his own section. Each group has its specialized problems as well as those common to all industrial activities. Through these sections members of the same or related industries can take part in projects, discussions, and personal conferences. The sections are convenient groups for working together and getting acquainted.

But the experienced safety man knows that knowledge is where you find it. The program of another section may offer just what he wants to know. The most frequent and pressing problems, after all, are common to all industries.

Perhaps 10 per cent of those who attend a Congress take some active part in the program. About 900 present papers or serve on panels. Some add their opinions and experience to the discussions. Others ask questions, and these add interest to the meetings.

But even the silent listeners make their contribution. A speaker likes filled chairs and an attentive audience. Those who listen may be storing ideas and information that may be helpful immediately or may pop out of the subconscious mind years later.

Supplementing the sessions as a source of useful knowledge is the Exposition—a fascinating concentration of information, product samples, and ideas. The displays add color, action, and interest to the gathering and provide three-dimensional evidence of progress. The exhibitors hope you'll find what you want among their products. But even if you aren't buying now, they'll be glad to meet you and learn more about your problems.

Looking for help? You can be sure of finding it at the Congress, whatever your specific safety interest may be.

See you in Chicago!

NATIONAL SAFETY COUNCIL

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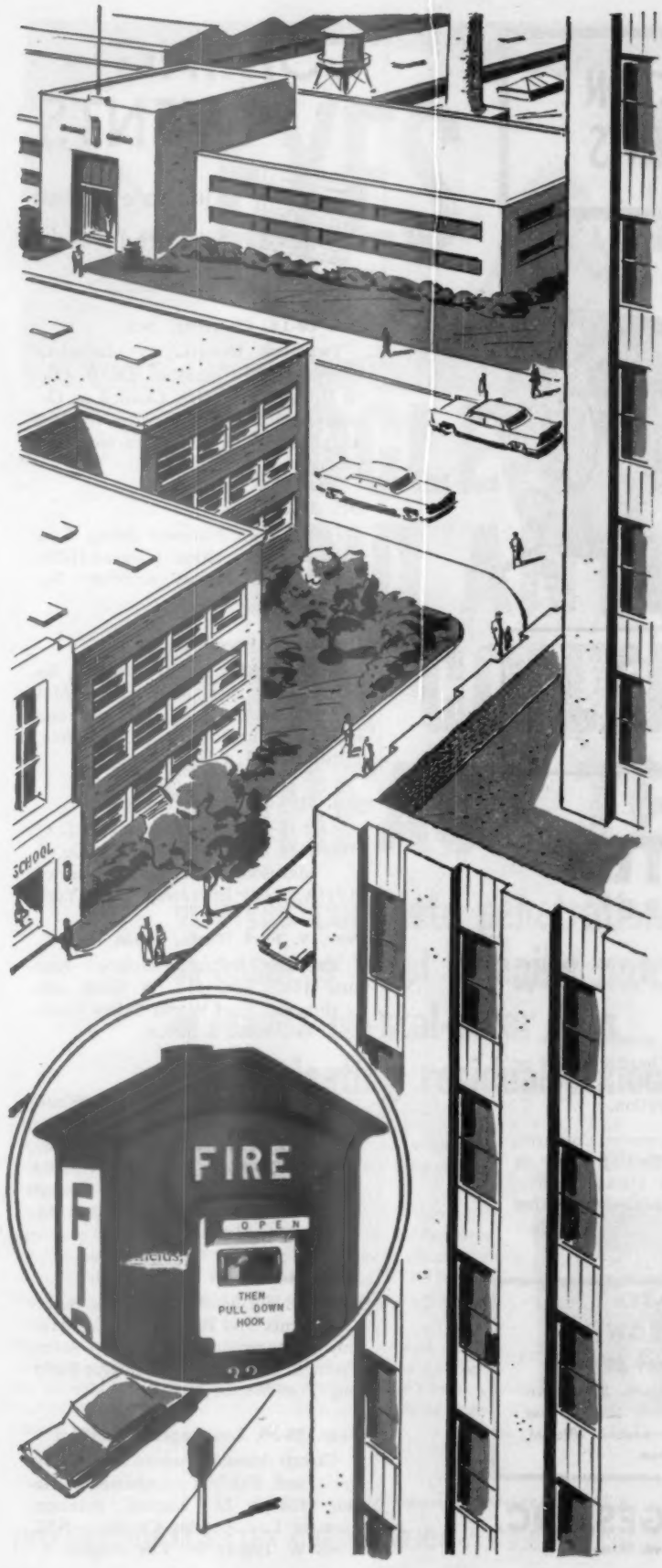
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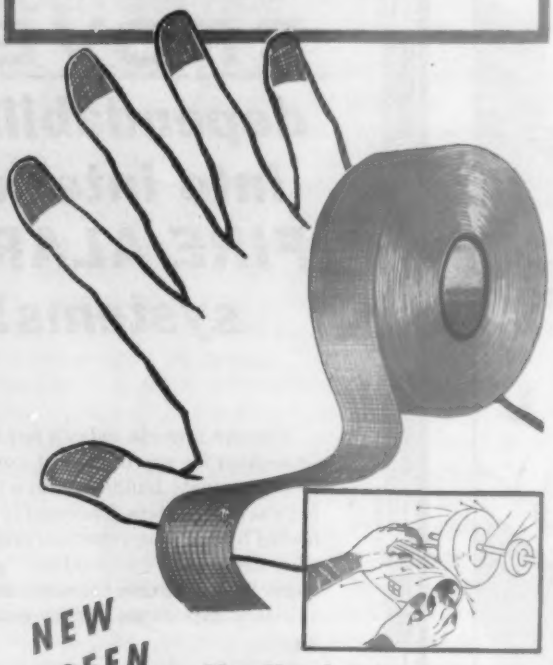
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COMING EVENTS



in safety and related fields

Oct. 10-12, Charlotte, N.C.

Twentieth Congress on Industrial Health (Hotel Charlotte). Dr. B. Dixon Holland, secretary, Council on Occupational Health, American Medical Association, 535 N. Dearborn St., Chicago 10.

Oct. 17-21, Chicago

Forty-eighth National Safety Congress and Exposition (Conrad-Hilton Hotel). R. L. Forney, secretary, National Safety Council.

Oct. 26-27, Pittsburgh, Pa.

Twenty-fifth Annual Meeting, Industrial Hygiene Foundation (Mellon Institute). Dr. H. H. Schrenk, managing director, 4400 Fifth Ave., Pittsburgh 13, Pa.

Oct. 31-Nov. 4, San Francisco

Eighty-eighth Annual Meeting, American Public Health Assn. Dr. B. F. Mattison, executive director, APHA, 1790 Broadway, New York.

Nov. 9, Fort Worth, Texas

Sixteenth Annual Industrial Institute (Hotel Texas). L. W. Graff, safety director, Fort Worth Safety Council, Fort Worth 2, Texas.

Feb. 2-3, Milwaukee, Wis.

Nineteenth Annual Mid-Winter Safety Conference and Exposition, Wisconsin Council of Safety, Inc. (Hotel Schroeder.) R. W. Gillette, executive director, Wisconsin Council of Safety, Inc., 1 West Wilson St., Room 234, Madison 2, Wis.

Mar. 14-15, Fort Wayne, Ind.

1961 Northeastern Indiana Safety Conference and Exhibit. Ivan A. Martin, manager, Fort Wayne Safety Council, Chamber of Commerce Building, Fort Wayne, Ind.

Mar. 28-30, Los Angeles, Calif.

Eighth Annual Western Safety Congress and Exhibits (Ambassador Hotel). Joseph M. Kaplan, manager, Greater Los Angeles Chapter—NSC, 3388 W. Eighth St., Los Angeles 5.

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Trustees Award to Kalamazoo and New Jersey

KALAMAZOO, Mich., and New Jersey have been named by the National Safety Council as the city and state which did the most in 1959 to protect their citizens from accidents of all kinds.

They became the first winners of the new Trustees Award, which differs from other NSC recognition by considering all fields of accident prevention covered by the Council —traffic, work, home, farm, school, recreation, and transportation. Previously, Council recognition has been limited to a particular phase of safety involved in an award.

In conferring the awards, the Council proclaimed Kalamazoo and New Jersey as Green Cross city and state of the nation.

The Trustees Award—in honor of the Council's Trustees—is based not only on actual accident records, but on accident prevention activities by media, churches, civic and youth groups, public officials, and safety organizations.

Each city and state which earns the annual award will receive an art object in Steuben glass, fashioned to symbolize the Flame of Life which accident prevention seeks to sustain.

Formal presentation of the 1959 awards will be made at the banquet of the 48th National Safety Congress, annual convention of the Council, in the Conrad Hilton hotel in Chicago Tuesday Oct. 18, before 2,000 guests.

"Selection of Kalamazoo and New Jersey was made after the most exacting and comprehensive study by our staff and the judges of the award," said Howard Pyle, Council president.

"Representing as it did the first time any award has been established on the basis of the programs and records of a city or state in every area of safety, the award could be determined only after months of exhaustive review of the accident records and the accident prevention activities of hundreds of cities and every state.

"Every city of more than 50,000 population which reports its accident records to the Council was considered for the award. And all states except Alaska and Hawaii were considered. Information on Alaska and Hawaii for 1959 was incomplete.

"It should be emphasized that while the total score attributed to Kalamazoo and to New Jersey was higher than that of any other city or state, Kalamazoo and New Jersey did not necessarily excel in each separate category of accident prevention.

"But the honor that has come to the recipients of the award could not have beeen achieved, we are sure, without a sustained, intelligent, and effective effort by public officials, safety organizations, and many other groups and individuals.

"Safety does not happen. It is earned. The National Safety Council therefore salutes and commends Kalamazoo and New Jersey for bringing to their citizens the assurance that they have chosen as their home a place where safety is not a word but a way of life."

Judges of the award were members of the Awards Committee of the Council's Board of Directors. They were H. G. Mangelsdorf, Standard Oil Co. (N.J.); Robert R. Burton, senior vice-president, Kenyon & Eckhardt, Inc.; Dr. A. L. Chapman, assistant surgeon general, U. S. Public Health Service; Robert T. Ross, manager, Employee Services Department, Ford Motor Co.; and A. E. Spottke, vice-president, Allstate Insurance Company.

Flame of Life Award Is Unique



The Flame of Life was specially designed and made by Steuben Glass for the National Safety Council. It is planned that two examples will be made each year to be used by the Council as their annual Trustees Awards.

The piece is a tall, abstract crystal sculpture in the form of a flame which curls in an upward sweep from a narrow base to a pointed top. It is made entirely by hand by a skilled glassmaker and then polished like a jewel.

The crystal sculpture will be reserved for the exclusive use of the National Safety Council and will not be duplicated by Steuben. It was designed by Donald Pollard. Among Pollard's many other works is an engraved crystal globe in the collection of President Eisenhower.

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By BILL ANDREWS

The home-made movie of shop hazards was pretty crude, but it got management stirred up, including one tycoon who hadn't seen it

(Fiction)

THE UNSEEN FILM

October 6, 1960

LEE SHOWED his shop-floor film at the Management Round Table at the Industrial Club. As a motion picture, it left a lot to be desired. He shot with only the normal shop lighting. Since he wanted scenes of shop life as it is, he shot with a small camera held in his hands. The result was pretty bad photography —uneven lighting, unsteady picture. Often the key points were subordinated in the picture to irrelevant details.

It was an amateurish effort, and perhaps it would not have held the attention of the audience if it had not been for the fact that each man present was a responsible executive of some operation on the project, and each knew that the next sequence might be an embarrassing presentation of some fault in his own shop.

Not that the pictures presented any hideous safety faults. Nobody was smoking near open gasoline cans. Nobody was running a power press with the guard removed. Nobody was operating a grinder without wearing goggles.

Still, with the aid of a soundtrack commentary dubbed onto the film, Lee had been able to present some pretty dramatic evidence of shortcomings. We had some housekeeping detail shots that hit home —cluttered aisles in one plant; accumulated litter under warehouse stairs; a group of workers skirting a large oil puddle; even—and Lee insists he didn't stage this—a banana peel on a stair. Then we had what Lee called an *un*fashion show —a below-waist-level shot of a group of women workers showing several in high-heeled or open-toed shoes; a couple of girls working at machines and whose long hair had strayed far out from under their caps; a group of machinists whose equipment included rings, wrist watches, and one identity bracelet dangling near the moving parts of a drill press.

He had some machine shots which demonstrated unsafe work practices. He had some shots of power-truck operations that would have been impressive if only the lighting had been better or he had been closer to his subjects. He ended with his real prize—a sequence in which a heavy machine was being moved to its location when the noon whistle blew. It was promptly deserted by its hungry attendants and left sitting in the aisle completely blocking a fire escape exit.

The film produced some discussion, some questions, and some defensiveness. We had been careful not to shoot from angles that would make it easy for outsiders to identify the plant pictured in each sequence. But the men responsible recognized their own plants in most cases, and they often gave their own faults away by making apologies or pointing out that the scenes weren't typical.

I summed up after the discussion, freely admitting that the scenes were anything but typical. "But accidents, gentlemen, aren't typical, either," I said. "They come from individual or group failures—and all we wanted to do with this film was point out that failures are occurring here and there on the project."

I started to leave the meeting in considerable doubt about the usefulness of the film. Logan Bradford, personnel director of Starforth's, caught up with me at the cloakroom and asked me to come into the lounge and meet his high brass.

Since the whole purpose of the film and the presentation was to try to make a dent in the thinking of top management, I put my hat back on the hook and went with Logan. The superintendent of Starforth's was there and the general foreman —both of them nodding acquaintances of mine already. The man in the red leather chair was a stranger to me—and apparently a man of substance in the Starforth organization. He had not attended the Round Table.

Informal introductions established that he was Morgan Starr and was the man who contributed half the name of Starforth (the other being Seaforth of the Piedmont textile family). Mr. Starr had the appearance of a genial retired banker, the harsh, rasping voice of a foreman of a gang of construction laborers, and a mind that snapped and crackled.

Introductions complete and Mr. Starr settled back in the red chair (with a long highball), Logan briefed me in this fashion: "We've been telling Mr. Starr about the film. He asked if any of your horrible examples were from our plant, and we told him they were not. He

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Cotton work glove

Vinyl-impregnated fabric Werx glove

Which hand was better protected?

Test after test by safety engineers demonstrates that job-fitted gloves not only protect better, they cost less because of longer wear and fewer nuisance hand injuries.* For example:

CASE No. 582: Handling highly polished laminates, Edmont's vinyl-impregnated Werx glove gave a surer grip and better protection against sharp edges, eliminated the problem of lint marks, and outwore the 10 oz. cotton gloves previously used 4 to 1 . . . . cut glove costs 50%.

CASE No. 633: Strapping steel wire around boxes, Edmont *job-fitted* Super Werx gloves wore 4 times longer than the leather palm gloves previously used . . . cut glove costs 73%.

CASE No. 662: Handling hearing aid components, light, extremely flexible Edmont Werx-Lite gloves not only kept powdery chemicals from filtering through to the operator's hands, but gave more sensitive "feel" and outwore the light cotton gloves previously used 5 to 1.

PROVED IN MANY PLANTS

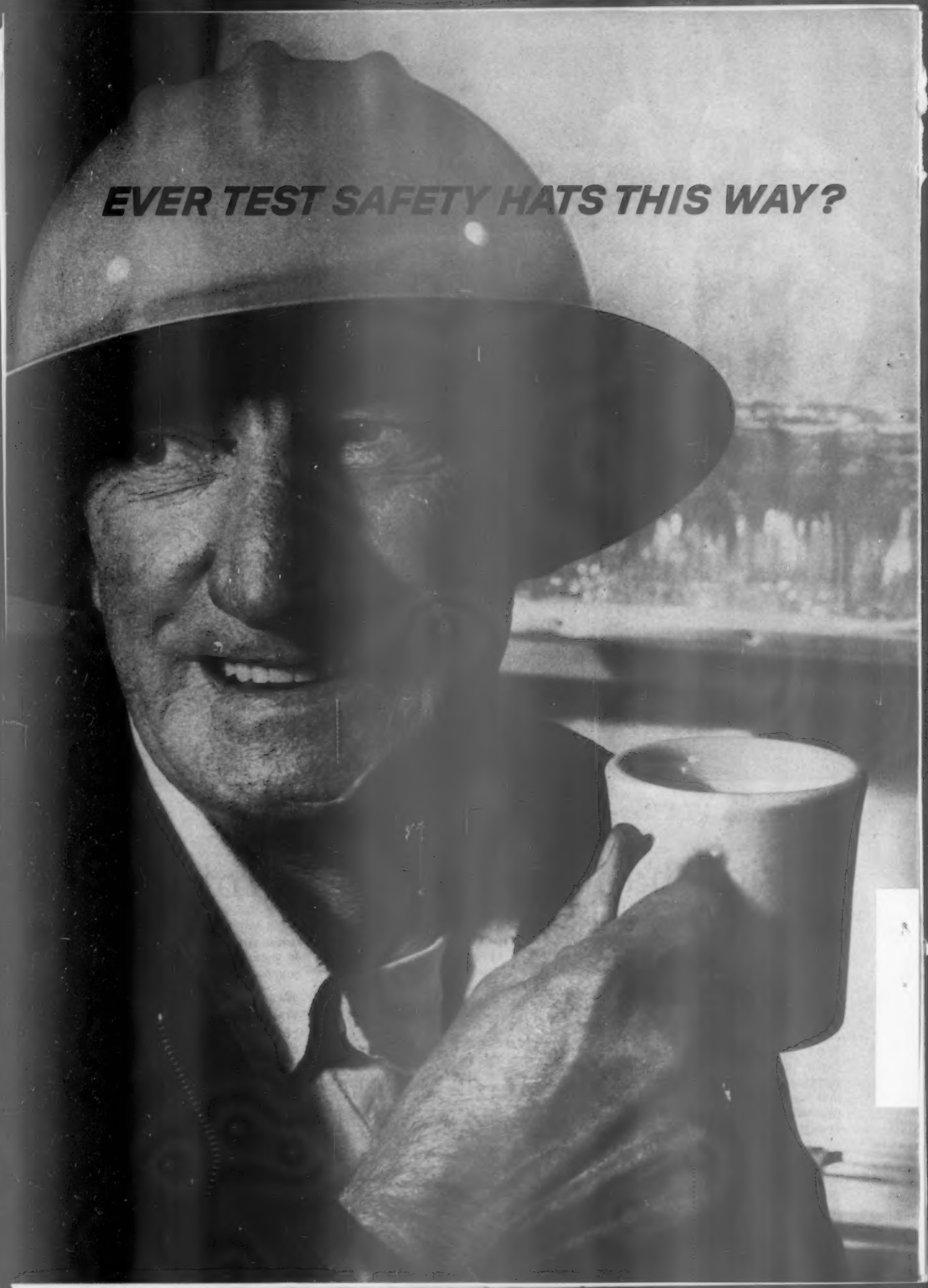
Hundreds of verified cases like the above prove that safety and economy go hand-in-glove. The Werx-type gloves used on the above operations (three of the many kinds made by Edmont) are of vinyl-impregnated fabric which keeps dirt out but lets air in, gives non-slip grip, is extremely flexible and machine washable. Regular Werx gloves outwear 8 oz. cotton 5 to 1; Werx-Lite gloves wear 3 times longer than 8 oz. cotton; the Super Werx outwears heavy 18 oz. cotton 6 times. A fourth style, Perforated Werx, is extra cool. Natural hand action pumps air through its perforated back.

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Edmont
JOB-FITTED GLOVES


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What's a Bullard POWER-BLOC suspension got?
Turn it over alongside four or five others and you'll see.

Bullard has a 6-point suspension. Most others have 4. This keeps the shell steadier—and gives an added margin of protection. Or, look at the adjusting clips: Bullard has two, so the shell fits evenly. No ungainly wobble or imbalance. Run your fingers around the wide, smooth sweat band. Both Bullard vinyl and new perspiration-absorbent poly-urethane bands protect against chafing and irritation.

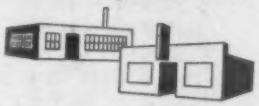
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SMALL BUSINESS and ASSOCIATIONS

By RAYMOND C. ELLIS, JR., and JOHN T. CURRY



Small Business Program Staff,
National Safety Council

Exhibit Represents NSC at Annual Meeting Of American Society of Association Executives

Five hundred members and guests of the American Society of Association Executives attended the 41st Annual Meeting of the organization this August at French Lick Springs, Ind. This society is the world's largest group of association management experts.

Gov. Harold W. Handley of Indiana gave the keynote address. Glenn B. Sanberg, executive vicepsident of ASAE, established the convention theme, "Targets for the 60's."

The Council presented an exhibit advocating a "Safety in the 60's" program for associations, the first time such an exhibit has been presented at an ASAE annual meeting. John T. Curry, NSC association consultant, manned the exhibit and participated in workshops.

Safety Engineers' Stake In Small Business

Today there are about 4,700,000 business groups in the United States. Of these, 4,000,000—about 87 per cent—employ four or fewer employees. In the same group there

—*To page 208*



Mr. and Mrs. George H. Isaacson review material in NSC exhibit during the American Society of Association Executives 41st Annual Meeting at the Sheraton Hotel, French Lick Springs, Ind. He is manager of American Institute of Laundering, Joliet, Ill.

← Circle Item No. 5—Reader Service Card

THE SAFETY VALVE



Nothing human is alien to me

—TERENCE

FORTY YEARS AGO

As SOME OF YOU old-timers may remember, 1920 was an election year. The war was fading into an unpleasant memory. The people hopefully voted for Harding and "normalcy."

Also, you may remember, it was first time women exercised their new freedom to vote.

On September 27, the Eighth National Safety Congress opened in Milwaukee, where the safety movement had been born in 1912. But this time the Hotel Pfister wouldn't hold all the meetings and delegates. They met in the vast Auditorium, where Milwaukee's famous safety schools for foremen are held.

By 1920, the National Safety Council had really grown up. It had more than 4,000 members, and 20 sectional groups had been organized to serve the specialized needs of members.

The treasurer's report showed expenditures of $233,413.87 for the fiscal year just ended—$9,500 in the red. Membership and income had been growing, but expanding services were one jump ahead of revenue. Many an organization could say that today.

President of the Council for 1919-20 was Ralph C. Richards, chairman of the central safety committee of the Chicago & North Western Railway. Charles P. Tolman, chairman of the manufacturing committee of National Lead Company, was elected to succeed him.

The NEWS, only a few months old, got a mention in President Richards' address:

"NATIONAL SAFETY NEWS, with which you are all acquainted, is a most useful organ of the Council and has great possibilities for obtaining the publicity we need, and it is believed that advertisements will make it self-supporting."

C. W. Price, the Council's general manager, had this to say:

"The feature of the Council's work which has attracted most attention has been the development of the publicity department and the publication of NATIONAL SAFETY NEWS. Enlargement of the one-page weekly letter into a 20-page weekly magazine has offered a popular and effective medium through which the headquarters is able to serve members."

Gross revenue from the NEWS to date was $2,651.18.

While industrial safety was still the Council's major interest, public accidents were attracting more and more attention. The public safety group had not yet progressed from a section into a major division. Safety instruction in schools was off to a good start with active support from many educators.

Women, who had first entered industry in large numbers during the war, were recognized as a permanent part of the work force and a session was devoted to their health and safety problems. One of the speakers was Miss Frances Perkins, then a member of the New York State Industrial Commission.

Banquet speaker was Robert W. Campbell, attorney, chairman of Illinois Steel's central safety committee and first president of the Council. His reminiscences of the Council's beginning were interesting and enlightening.

The *Transactions* of 1920 filled a volume of 1,386 pages. It provided a complete record of the Congress, including every trivial remark from the floor. If a speaker didn't have a manuscript, a Stenotype operator was there to take down everything. Talk wasn't cheap —even in those days of lower printing costs.

Looking through the *Transactions* of 1920 has a melancholy fascination. There are so many familiar names among the program participants, and I have written obituaries for many of them.

PASSING OF THE HUMORIST

IT USED TO BE that no banquet was complete without a humorist on the program, perhaps to serve as a chaser for the serious speakers. In addition, the toastmaster was often an amateur or professional gagster. Corn wasn't listed on the menu, but it was an entree at many a Congress banquet.

There used to be a lot of those professional funny men—imitations of Will Rogers and Mark Twain. Their agents got out imaginative booklets describing the feast of wit and wisdom on tap for a modest fee.

Many of them did slip in a few dashes of tepid philosophy and sentiment between gags for a change of pace and to make listeners feel they were getting something solid. But that line doesn't go over today. Their best efforts would seem pretty flat to those who follow Red Skelton or Bob Hope.

Here are a couple of gems which fell from the lips of one banquet speaker many years ago as reported in the *Transactions:*

"Several years ago a politician who was quite disconsolate at the outcome of an election laid down on the Grand Trunk to end it all—and starved to death. (Laughter)." (Seems to me I once heard that same joke about the Wabash.)

"At Battle Creek they have a school of reformed punctuation—a sanitarium where you go in with a colon and come out with a semicolon. (Laughter)."

One reason for the decline of the old-fashioned humorist is the taboo on dialect jokes—once their principal stock-in-trade. They now bring loud protests from spokesmen for ethnic groups.

Also, today's banquet-goers have less durable seats. It takes a real spellbinder to hold many of them after 9 p.m.

CAMPAIGN THOUGHT

The politicians' promises of yesterday are the taxes of today.—*William Lyon Mackenzie King, former prime minister of Canada, quoted by Bennett Cerf.*

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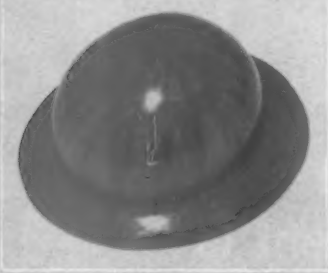
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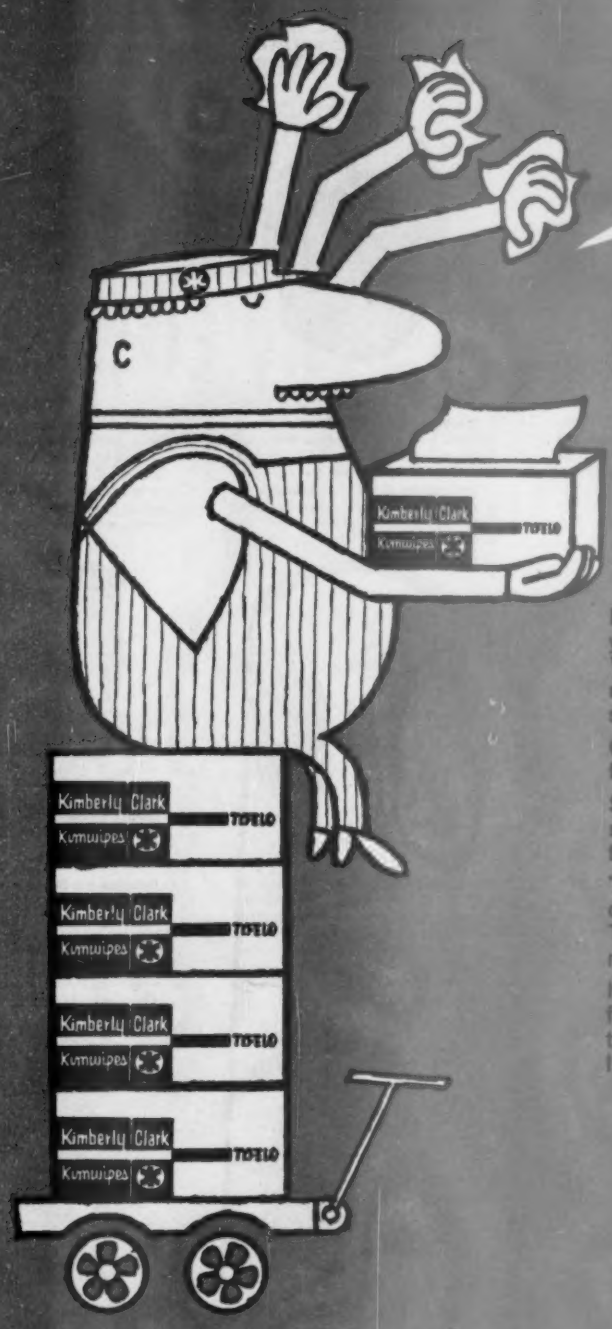
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1960

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Conrad Hilton Hotel • Chicago • October 17-21

Directory of Exhibitors—Page 19

Directory of Products—Page 87





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NAME	BOOTH NUMBER	PAGE NUMBER
ACME PROTECTION EQUIPMENT CO. **1201 Kalamazoo St., South Haven, Mich.** Representatives: R. A. Flood, G. M. Glidden, Leonard Hagen, L. N. Rodenhouse, Dick Rosga, Wm. Wuthenow Manufacturers—Industrial gas masks, chemicals and accessories.	71	—
ADVANCE GLOVE MFG. CO. **901 W. LaFayette Blvd.,** **Detroit 26, Mich.** Representatives: Ralph Edsen, Wm. Flowers, Chas. E. Harris, Wm. Plante, Fred J. Weber Manufacturers—Safety gloves—aluminized asbestos—aluminized safety clothing—duck wool protectors reinforced—emergency eye rinse bottles—manufacturers of industrial work gloves.	20	—
AETNA CASUALTY & SURETY CO. **151 Farmington Ave.,** **Hartford 15, Conn.** Representatives: James F. Goyette, Dean R. Cook, James P. Swenson Manufacturers—Driver education information—free motion picture films and safety booklets.	103-104	—
AIR-SHIELDS, INC. **Hatboro, Pa.** Representatives: Wayne Nelson, Gerald Jaffe Manufacturers—AMBU rescue breathing equipment.	315	70
AKRON BRASS MFG. CO., INC. **Spruce St., Wooster, Ohio** Representatives: J. E. Fichelson, Jack Owns, H. A. Strain Manufacturers—Brass fire fighting equipment, nozzles, couplings, valves, foam, siamese, adapters, playpipes and deck pipes.	196	—
ALAN WOOD STEEL CO. **Alan Wood Road, Conshohocken, Pa.** Representatives: William Eyre, W. Hallman, Francis M. Heston, J. Houston, Walter L. Jones, Leon J. Lieberman, Joseph A. MacQueen, C. McGuigan Manufacturers—AW ALGRIP abrasive rolled steel floor plate—approved for safety by Underwriters Laboratories.	119	199
ALIM CORP. **11 Park Place, New York, N. Y.** Representatives: Mervin Alembik, Wm. Doyle, Walter Eiermann, Leonard S. Oppenheimer Manufacturers—All class fire extinguishers and fire retardant paints	70	22-23
AMERICAN ALLSAFE CO., INC. **1245 Niagara St., Buffalo 13, N. Y.** Representatives: L. C. Churchill, J. V. Militello, W. F. Sterne, N. J. Taylor Manufacturers—Industrial Safety Equipment.	21	—
AMERICAN BILTRITE RUBBER CO. **22 Willow St., Chelsea, Mass.** Representatives: Henry Lee Manufacturers—Rubber, composition and neoprene safety soles.	115	30
AMERICAN CHAIN & CABLE CO., INC. **454 E. Princess St., York, Pa.** **271 S. Penna St., Wilkes-Barre, Pa.** Representatives: W. T. Brockett, O. C. Champion, A. C. DeHaven, G. A. Faerber, F. Longardner, M. J. McGovern, T. W. Miller, A. M. Roberts, T. Skalaban Manufacturers—ACCO Registered wire rope slings and sling chains featuring HI-PLI cable-laid wire rope slings and Kuplex sling chains; and Solenoid spreader beam sling chain assembly.	3-4	39, 63, 99
AMERICAN INDUSTRIAL SAFETY EQUIPMENT CO. **3500 Lakeside Ave., Cleveland 14, Ohio** Representatives: E. J. Morse, Wm. J. Morse, M. R. Nathan, Donald T. O'Shea Manufacturers—Face shields, goggles, gloves and mittens.	176	
AMERICAN LAFRANCE CORP. **445 N. Lake Shore Drive,** **Chicago 11, Ill.** Representatives: John H. Allen, W. P. Barwinkel, Henry E. Baum, Wm. J. Daniels, Raymond E. Diver, Les. Eichler, G. W. Erdman, Bud Johnson, Earl A. Larsen Manufacturers—Fire apparatus and fire fighting equipment.	116-117	—
AMERICAN OPTICAL COMPANY **14 Mechanic St., Southbridge, Mass.** Representatives: A. W. Alberding, C. C. Albrecht, F. T. Ashe, F. J. Bender, H. G. Bourne, A. R. Barrington, W. E. Cornelius, F. J. Donlea, R. M. Edmiston, W. G. Engel, C. H. Gallaway, D. L. Gallaway, J. Geden, C. H. Jacobson, J. Koury, W. R. Lofgren, J. T. Monahan, R. H. Moulton, R. C. Nickum, R. Pfaller, C. K. Stafford, J. Waldrip, T. A. Walsh, T. P. Welch, J. Williams Manufacturers—Head, eye and respirator protective devices; safety clothing and safety specialty products.	78-79-80-81	B.C., 55-56
AMERICAN OPTOMETRIC ASSOC., INC. **4030 Chouteau, St. Louis 10, Mo.** Representatives: David C. Sharman, Robert Sheller, Calvin A. Wood Manufacturers—"Vision for Safety"—On the Highway, In Industry.	210	—
AMPCO METAL, INC. **Box 2004, Milwaukee 1, Wis.** Representatives: Joseph A. Boyle, Richard A. Lustig, Robert H. Louthain, Fred H. Opitz Manufacturers—Complete line of non-sparkings, corrosion-resistant safety tools.	10	206
ANSUL CHEMICAL COMPANY **Stanton St., Marinette, Wis.** Representatives: Roger Allen, C. H. Armstrong, Merritt Bauman, Jim Bowman, George Brolle, Art Chevalier, Al Dill, Arthur B. Guise, C. F. Hooper, Frank Hruska, Roland Larsh, V. E. McConochie, L. C. McKesson, Roger Nicklaus, John Schwarz, Robert E. Sexmith, George Vermilye, Jack West, Glenn Wilpolt, Ed Zeratsky Manufacturers—Fire Extinguishing Equipment.	92-93	71
ANTREX CORP. **2001 W. Willow St., Chicago 47, Ill.** Representatives: Bernard Schwartz, H. Schwartz, A. Tenabe, B. Kamae, M. Zeltlan Manufacturers—Electronics safety communication and warning devices: maskvoice, Power megaphones, walkietalkie intercoms.	211	—
AUTO-CRAT MFG. CO. **2425 W. San Fernando Rd.,** **Los Angeles 65, Calif.** Representatives: Peggy Leonard, William A. Leonard, Hazel V. Noe, William M. Noe Manufacturers—Auto-Crat and Bodi-Guard safety belts, interceptor harnesses, babi-guard belts.	224	—
BACHRACH INDUSTRIAL INSTRUMENT CO. **200 N. Braddock Ave., Pittsburgh 8, Pa.** Representatives: Bill Milan, Joseph V. Palmer, John W. Smith, J. A. Stein, Rudolf Ulrich Manufacturers—Instruments for gas analysis and air measurement.	324	213

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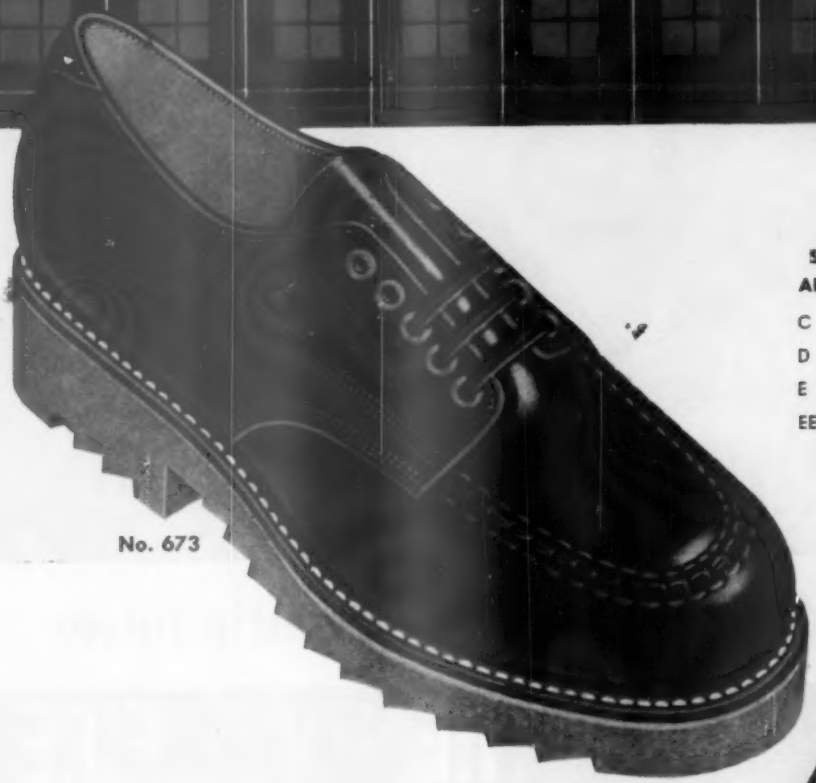
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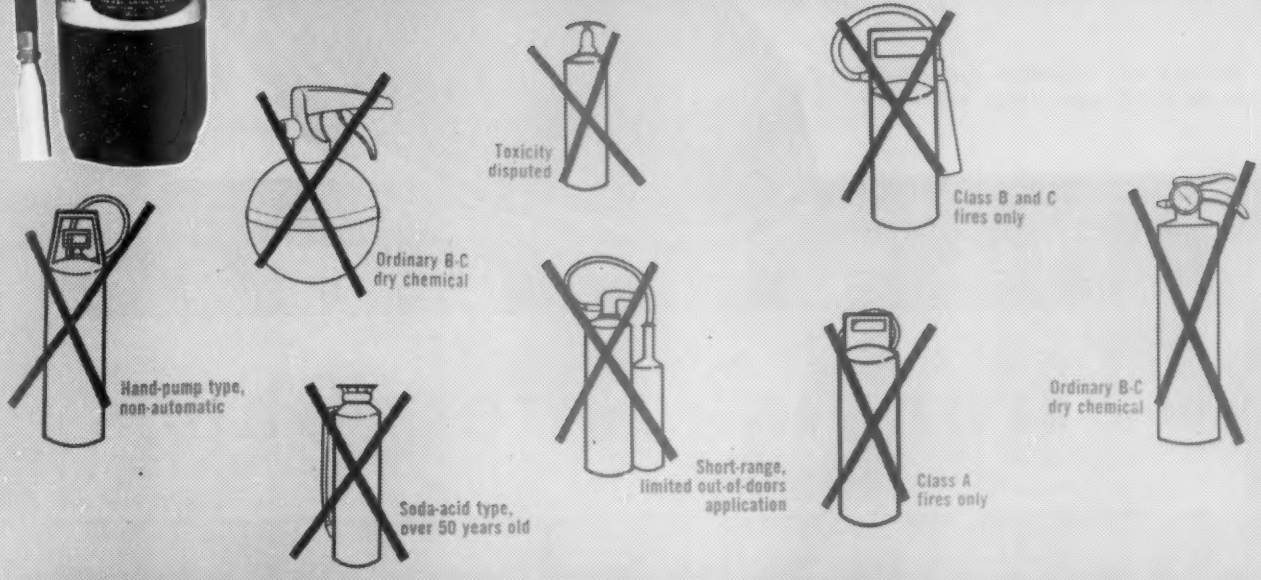
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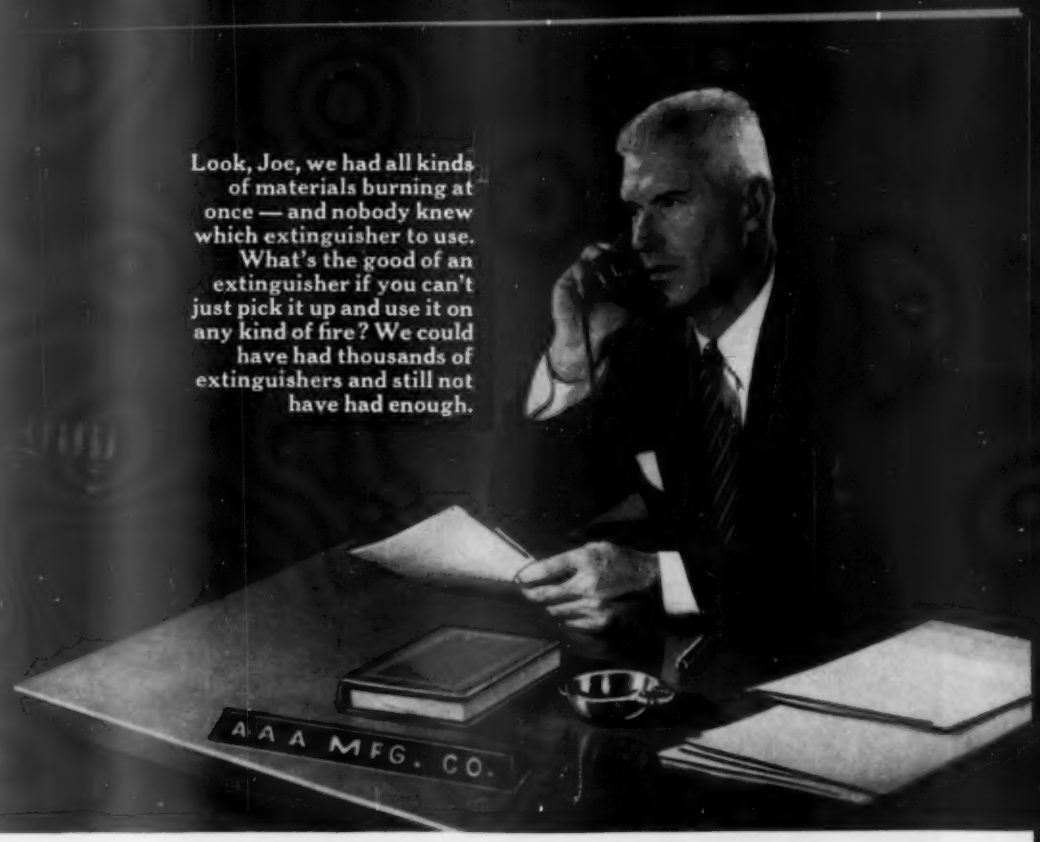


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BASHLIN, W. M. CO. **Bashlin Bldg., Grove City, Pa.** Representatives: D. L. Christley, Lewis Church, D. B. Elliott, Harry Hutchison, John O'Brien, A. J. Schell, Jr. Manufacturers—Linemen's and industrial safety equipment.	5-6	62
BAUSCH & LOMB INC. **635 St. Paul St., Rochester 2, N. Y.** Representatives: Henry Anderson, Richard Boulton, Barney Christie, Ed Close, Ed Fierle, Richard Foley, Robert Gasso, Fred Gay, William Godbe, Richard Graham, Jack Green, Jack Harby, Joe Hickey, George Houseworth, Rod MacDuff, Monroe McCormick, Charles Nercer, Al Mowson, James Naylor, Charles Neilson, Marty O'Dea, George Phreaner, Harry Powell, Robert Randall, Gordon Scott, Bernard Swift, Bill Woodard Manufacturers—Safety glasses, OrthoRaters and the "Titan" safety frame.	51-52-53	35-36 37-38
BEAM'S MFG. CO. **1327 N. Robinson, Oklahoma City, Okla.** Represen'atives: O. T. Beam, Harry Biltz, Charles Burlingame Manufacturers—Auto safety belts	27	—
BERYLLIUM CORP., THE **Box 1462, Reading, Pa.** Representatives: G. A. Bond, Charles Huesman, John Loftus Manufacturers—Standard spark-resistance, non-magnetic, corrosive resistance safety tools & new miniature, spark-resistance tools.	47	—
BEST'S SAFETY PUBLICATION **75 Fulton St., New York 38, N. Y.** Representatives: Harry Armand, Frank Matre, Jas. McDonough, P. H. Ryan Publishers of "Safety Maintenance" magazine, "Best's Safety-Maintenance Directo y" and "Your Safety News".	33	—
BETHLEHEM STEEL CO. **701 E. Third St., Bethlehem, Pa.** Representatives: T. O. Aho, H. H. Eschbach, S. S. Fox, C. A. Peterson, W. T. Shiffer, J. T. Smith, L. A. Stoppel Manufacturers—Wire rope slings and boom pedants.	177	195
BOYER-CAMPBELL DIVISION **6450 St. Antoine St., Detroit 21, Mich.** Representatives: Jim Hurl, Wm. Orr, J. F. Phillips, Bob Saylor, Joe Tetlak Manufacturers—Apex Safety hats & caps, super sight light magnifiers, and animated safety signs.	41	—
BROSSARD, LESTER L., CO. **540 N. Michigan Ave., Chicago 11, Ill.** Representatives: Robert G. Altenhoff, Lester L. Brossard, Warren DeMeyer Manufacturers & Distr'butors—Klear-Vu Traffic safety mirrors, Klear-Vu Traffic land markers and Protective hand creams and cleaners.	159	215, 244

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BROWNE, STEWART R. MFG. CO., INC. **258 Broadway, New York 7, N. Y.** Representatives: Robert E. Blonquist, Robert P. Browne, Stewart R. Browne, Jr., Harry Douglass, Roy L. Freese, Paul C. Haas Manufacturers—Electrical safety equipment, explosion-proof and vapor-proof portable inspection lites, explosion-proof flashlites, grounding devices.	151-152	—
BUHRKE, R. H. CO. **1403 W. Congress Pkwy., Chicago 7, Ill.** Representatives: M. M. Brown, Clarence E. Clark, Rudy Douglas, Russell M. Evans, Paul W. Stiegler Manufacturers—Occupational safety equipment and products for construction and maintenance.	111	80
BULLARD, E. D. CO. **2680 Bridgeway, Sausalito, Calif.** Representatives: George Andrews, R. P. Barker, E. W. Bullard, Sr., E. W. Bullard, Jr., E. J. Illes, Allen Kline, Russell Mills, Paul O'Donnell, Herbert A. Raschke, Norris Seastrom, Everett M. Witzel Manufacturers—Hard boiled safety hats & caps, bump caps, industrial first aid, safety materials handling equipment, vehicle alarms, portable rubber glove tester.	126-127-128	10-11
CAMPBELL CHAIN CO. **Norway and Elm St., York, Pa.** Representatives: Robert W. Elder, William E. Elder, Charles F. Feiser, Jr., R. M. Fuller, Malcolm Mangan, N. Allan Pettit, William J. Poglitsch, Kendall Steinmetz Manufacturers—"Guaranteed" "customized" and "Sentry" sling chains and all types of welded and weldless chain.	227	107
CHANCE, A. B. CO. **210 N. Allen St., Centralia, Mo.** Representatives: Robert Boehmer, Donald F. Collins, Vern Moody, W. T. Shreve, O. G. Anderson Manufacturers—Hot line maintenance tools, new tool insulation.	1	—
CHARLESTON RUBBER CO. **Stark Industrial Park, Charleston, S. C.** Representatives: W. J. Donigan, G. M. Hallett, W. J. Prohaska Manufacturers—Electrical workers' gloves, linemen's rubber sleeves, Bulldog wood safety clamps, red danger flags, plastic & fabric coated industrial aprons & sleeves, industrial natural rubber gloves, industrial synthetic rubber gloves, industrial neoprene rubber gloves, neoprene dry box gloves, rad bar radiation shielding lead loaded neoprene gloves.	194	228
CHEMICAL CORP., THE **54 Waltham Ave., Springfield 9, Mass.** Representatives: C. E. Evans, Harold C. Sweet, Yoshio Yamashita Manufacturers—Protective hand creams, cleaners & lotions.	40	176
CHICAGO EYE SHIELD CO. **2727 W. Roscoe St., Chicago 18, Ill.** Representatives: Karl Bahret, Charles Boyd, Leonard Bruce, Charles Carlberg, Chick Clay, Robert Coonley, J. W. Dee, John Ely, Sam Fisher, Jr., Fred Guilbert, Fred R. LaForce, Ray Lally, C. Russell Lawton, Wayne Maxwell, Pat Nicholson, Emmett O'Connell, Robert E. O'Connell, Wm. Palmer, Carl L. Ploch, H. Evan Riem, Charles S. Shaw, George Stanchfield, Thad Starszak, Arthur Swanson, Art Truelson, John W. Walter, R. Westerberg Manufacturers—Head and eye protective equipment.	72-73-74	I.B.C.

—To page 31



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Contact Dermatitis

SILCONEX (77% silicone) is the most universal skin ointment now available. It protects not only against water dissolved materials but also against solvents and oil-solvent—water—chemical mixtures. It resists exposure to strong acids and alkalis, oxidizing agents, salts and other chemicals whether in water or organic solution. It prevents initial sensitization by allergens. It is non-conducting and therefore useful in electronic operations. Simple to apply, one or two applications a day provide ample protection. It has an important place as the most universal weapon against contact dermatitis.

CLEREX & H-R CREAM SOLVENT PROTECTION protect the skin against organic solvents. They wash off with soap and water. CLEREX is a gel which forms a continuous, strong, elastic skin-adherent film which does not interfere with tactile sensation. The film is insoluble in all anhydrous organic solvents, oils and greases. It protects against the hydrocarbons (benzene, benzol, toluene, gasoline varsol, turpentine, kerosene, solvent naphtha), the chlorinated hydrocarbons, nitriles and the polymerizable monomers (styrene, acrylonitrile, and unsaturated esters for producing polyester resins). Used in making and using paints, varnishes, plastics, polyester resin—fiber-glass compositions, lacquers, inks, and in metal degreasing using trichlorethylene. H-R CREAM is a modification of CLEREX with a vanishing cream base. It is highly resistant to the materials listed under CLEREX. It is useful where protection must be applied to the face and arms as well as the hands. It has proven highly effective against phenolic vapors, creosote, extreme exposure to coolants, tars, rubber-asphalt and rubber-tar mixtures, petroleum oils, plastic and adhesive compositions.

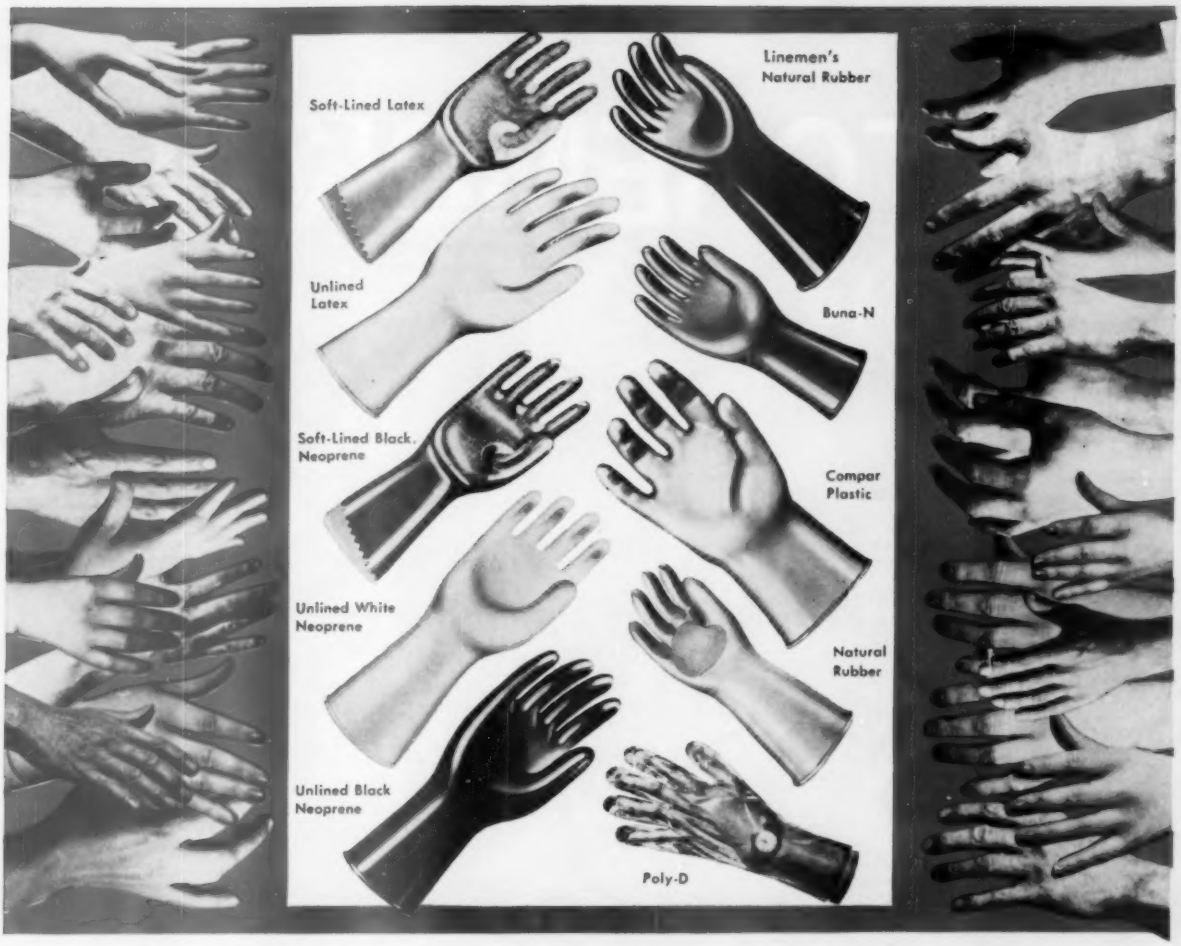
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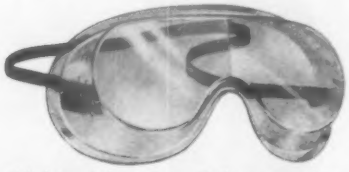
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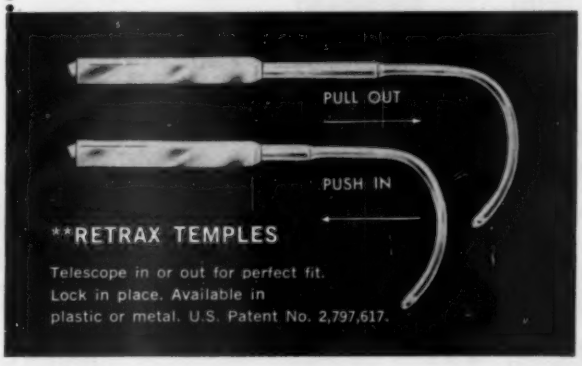
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CHRYSLER CORP. **341 Massachusetts Ave.,** **Highland Park, Mich.** Representatives: Roy C. Haeusler, Joseph L. Knapp Manufacturer—Automotive safety.	225	—
CLARK, DAVID CO., INC. **360 Park Ave., Worcester 2, Mass.** Representatives: Armand R. Casavant, G. Wayne Gibbs, Jr., Charles W. Kaufman Manufacturer—Pioneer designers of ear protectors, X-15 space suit & other special aircrew equipment. Environmental & special purpose clothing.	311	68
CLARK, J. R. CO., THE **Spring Park, Minn.** Representatives: Don Munson, Rollie Nichols Manufacturer—Industrial ladders.	222	—
COLUMBUS MCKINNON CHAIN CORP. **Fremont St., Tonawanda, N. Y.** Representatives: F. T. Benjamin, M. F. Cassity, R. G. Cromer, R. G. Hansen, M. C. Hendershott, G. P. Long, M. J. McCarty, J. T. Wilson. Manufacturer—Alloy steel sling chains.	68-69	77
CTL CO., INC., (LUMMIS MFG. CO.) **1710 W. Stewart Ave., Wausau, Wis.** Representatives: C. H. Clark, K. D. Lawson, W. R. Lummis, R. A. Telder Manufacturers—"Key-Bak—Key-reel automatically retrieves keys or tools."	317	234

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Look to

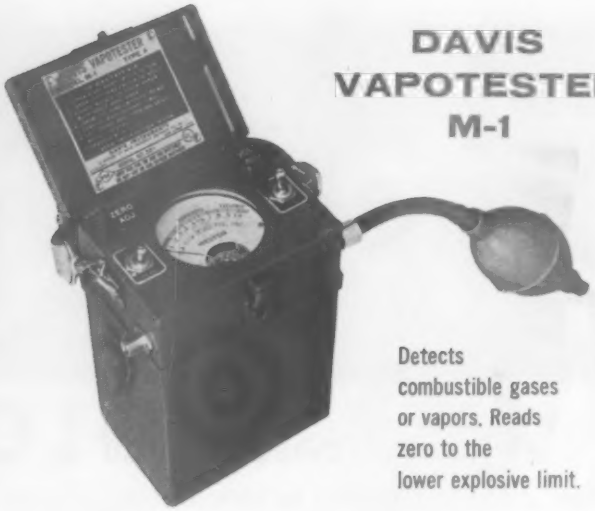
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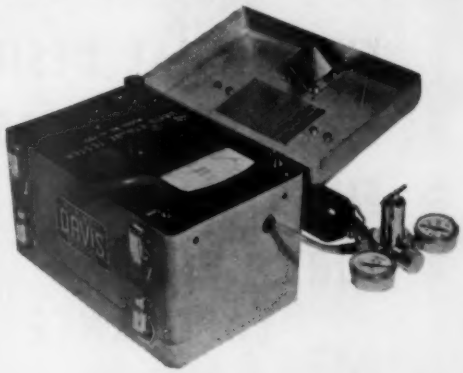
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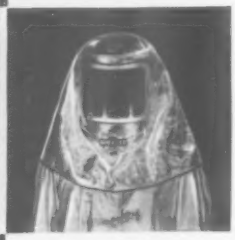
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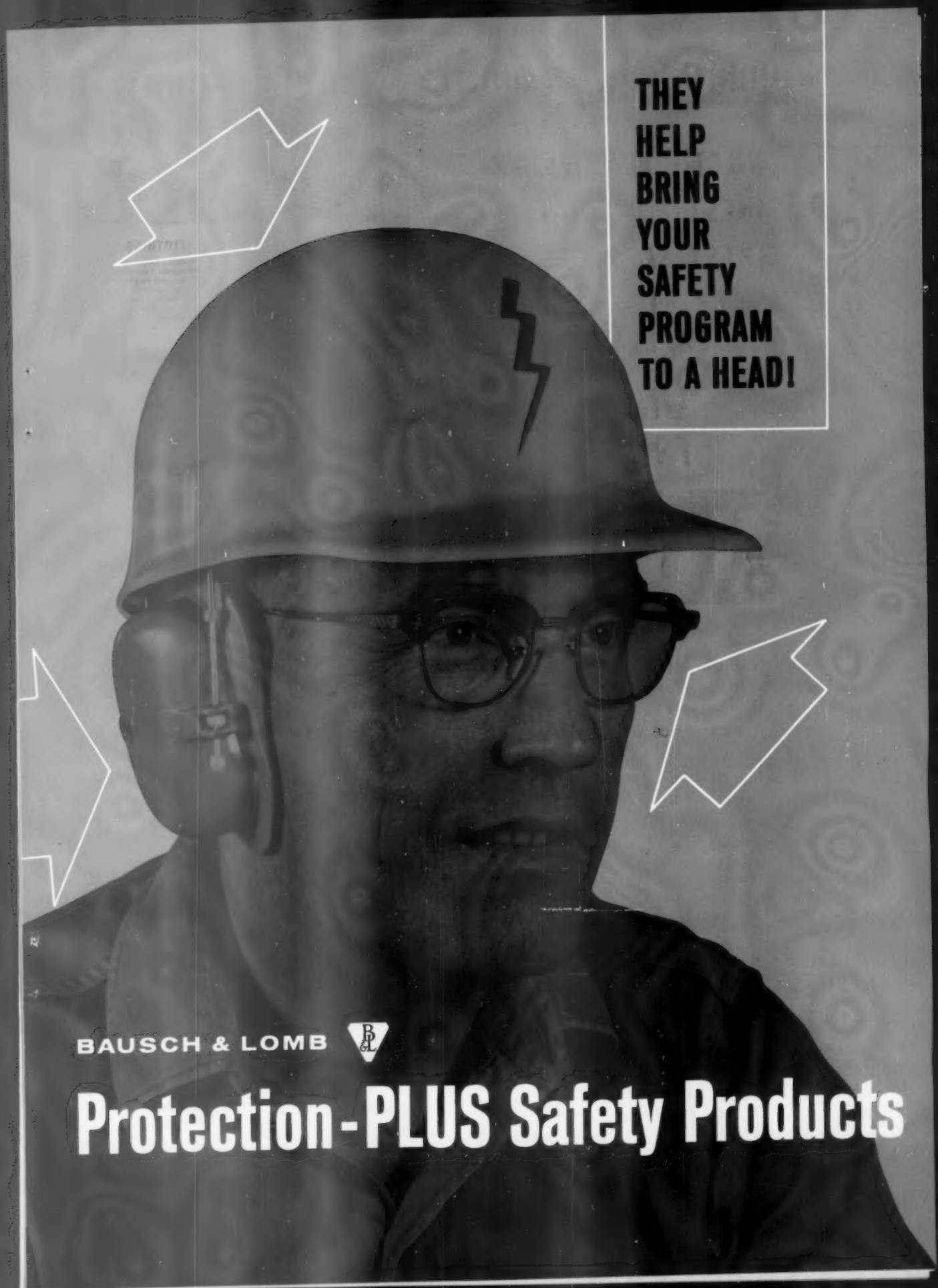
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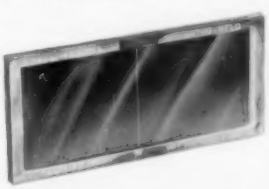
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Unusual comfort and fit in a soft but rugged flesh-colored polyethylene plate holder with wide visual field. Slotted caps cover wire mesh air vents to exclude light in welders' model.



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Give clear, sharp close-up view of work for welders who normally wear bifocal lenses. Precision molded from clear lucite, they approximate his vision through bifocal segment.



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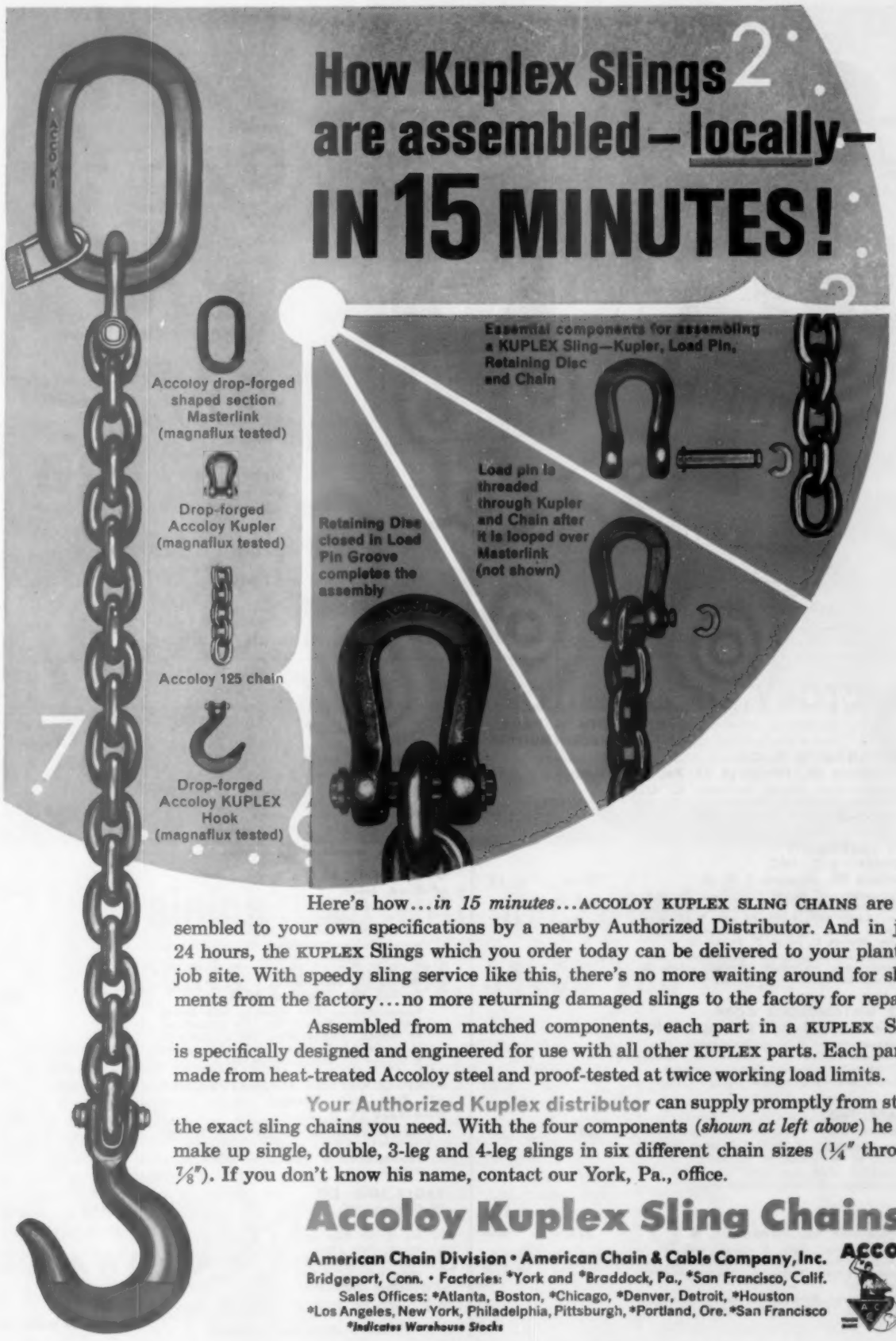
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DEWALT, INC. **Lancaster, Pa.** Representatives: M. R. Boyer, Wm. Kinderwater, W. W. Leahy, H. H. Smith Manufacturer—Radial Arm saws with the most advanced safety features ever.	181	—
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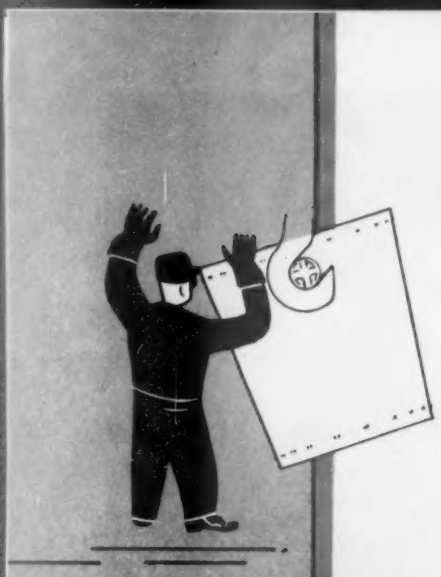
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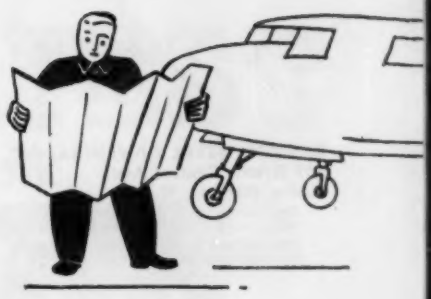
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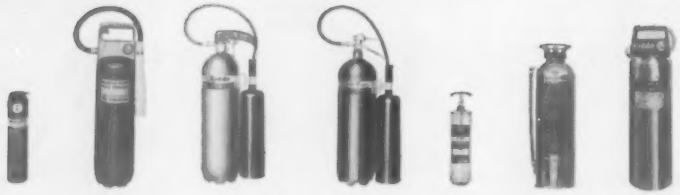




Left to right: New pressurized water; cartridge-operated water or anti-freeze; foam; soda-acid; pump tank—water or anti-freeze; pressurized loaded stream. All 2½ gallon; pump tank also 5 gallon.

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  SIGHT SAVERS have been scientifically designed to be exactly the right size to clean glasses best — *and without waste.*
- **Preferred by your employees!**
  Nationally advertised for many years, SIGHT SAVERS are already preferred and purchased by millions of satisfied users. When you provide SIGHT SAVERS your employees know you're providing the best — not a substitute.
- **Endorsed by leading opticians!**
  SIGHT SAVERS meet Federal specification UU-P-313d for lens cleaning tissues.

- **COMPACT**
- **STRONG**
- **FOOL-PROOF**

SIGHT SAVER WALL DISPENSERS are available from your safety supply distributor at $1.50 each. Locate them conveniently throughout your plant to put maximum eye safety at every worker's fingertips.

Give *your* employees the *easiest* way to keep lenses clean and they'll *wear* their safety glasses instead of shelving them! Order SIGHT SAVERS by name from your safety supply distributor*. Do you use *plastic* eyewear? Ask about new RAYON SIGHT SAVERS for the most efficient, scratch-proof way to clean *plastic.*

** In Canada from any branch of the Safety Supply Company.*

Booth 110 at National Safety Congress & Exposition

first in silicones

Dow Corning CORPORATION
MIDLAND, MICHIGAN

DIRECTORY OF EXHIBITORS

	BOOTH NUMBER	PAGE NUMBER
GRANET CORP., THE **25 Loring Drive, Framingham, Mass.** Representatives: Jack Casey, Bill Clay, John Mahoney, Jim Mayberry, C. E. Sanders, Bill Devlin Manufacturers—Coated fabric work gloves.	306	140
GRINNELL CO., INC. **260 West Exchange St., Providence 1, R. I.** Representatives: N. F. Lockwood, R. A. MacDuff, W. L. Prenzno, Richard Ray, D. M. Williams Manufacturers—Components for fixed fire protection systems.	221	72
GRO-CORD RUBBER COMPANY **807 N. Jackson St., Lima, Ohio** Representatives: E. L. Babcock, R. E. Farnham, Forest Moore, K. F. Trimble, John I. Williams Manufacturers—Neoprene, rubber, composition soles and heels for safety footwear.	120	—
HALPERIN, A. E. CO., INC. **75 Northampton St., Boston 18, Mass.** Representatives: A. E. Halperin, I. D. Halperin, M. D. (Mitch) Halperin Manufacturers—Halco first aid kits, safety equipment, Burn-Quel.	213	251
HAUS OF KRAUSE SAFETY SHOES **Rockford, Mich.** Representatives: John Moyle Manufacturers—Men's safety shoes for distributors serving industry.	43	46
HAWS DRINKING FAUCET CO. **Fourth & Page Sts., Berkeley, Calif.** Representatives: Richard D. Jonathan, George S. Morman, Harold K. Paschon Manufacturers—Emergency eyewash fountains, emergency showers and goggle wash fountains.	161	229
HILD FLOOR MACHINE CO., INC. **1217 W. Washington Blvd., Chicago 7, Ill.** Representatives: Frank Capace, Jim Connell, Bill Doris, Marvin Klein, Joseph F. Rotl, Andy Swierski Manufacturers—Maintenance equipment—UL listed explosion proof vacuum cleaners and floor machines.	130	51
HOPFELD INDUSTRIAL MFG. CO. (HIMCO) **734 A St., P. O. Box 54, San Rafael, Calif.** Representatives: Henry Hopfeld, Jack R. Lutz Manufacturers—HIMCO fiberglass safety ladders and accessories.	228	248
HYGIENE RESEARCH, INC. **684 Broadway, New York 12, N. Y.** Representatives: N. M. Elias Manufacturers—Protective ointments and mist-proofing cloth for goggles, welding masks, windshield etc.	197	26,106
HY-TEST SAFETY SHOES **1509 Washington Avenue, St. Louis 66, Mo.** Representatives: Otto Andre, Bob Crenshaw, Ed Hauer, Vince LoDuca, N. C. Whitsett Manufacturers & Distributors—Safety footwear; also conductive and special types for atomic usage.	94-95	42-43

—To page 52

FIBERGLASS *REINFORCED* LADDERS



OBTAINS
LIGHTWEIGHT STRENGTH OF METAL
AND
NON-CONDUCTING QUALITIES OF FIBERGLASS REINFORCED PLASTIC MATERIALS

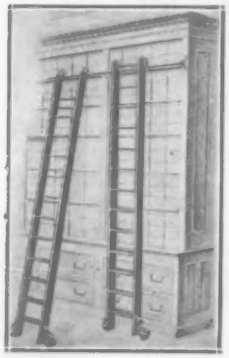
SAFEST LADDERS EVER MADE!

LIGHTWEIGHT 20% LESS THAN IN PAST

SPECIALLY DESIGNED FOR USE IN:
- *Telephone Company Work*
- *Power and Electrical Work*
- *Chemical Plants*
- *Wherever STRENGTH, SAFETY, NON-CONDUCTIVITY and LIGHTWEIGHT are necessary*

NOW! **New Fiberglass Step Ladders with aluminum flat steps.**

Also Oak Rolling and special ladders for stores, warehouses, file rooms.



PUTNAM ROLLING LADDER CO., INC.
32 Howard St., New York, N. Y.
SEE US IN BOOTH 174, NATIONAL SAFETY CONGRESS

FOR SAFETY'S SAKE

HILD

INDUSTRIAL MAINTENANCE EQUIPMENT



INDUSTRIAL VACUUM CLEANERS FOR WET AND DRY PICKUP

Cleans floors, walls, ceilings, machinery, oil sumps, water, metal chips, etc. Over thirty models to choose from. Every size from 6 to 55 gallons with ¾ to 7 h. p. motors. Inside or outside type filter bags. Dozens of attachments for use with 1½", 2" or 3" hose. Illustrated unit (model 655) designed for use on any standard 55 gallon drum. Excellent for furnace cleaning.

FLOOR SCRUBBING AND POLISHING MACHINES

Twelve models from 12 to 24 inch size—designed for maintaining factory or office floors. Every practical operating and safety feature — momentary contact safety switch, fully adjustable handle, non-marking bumpers, 3 conductor cord plus Hild heavy duty motor and silent gear unit for years of dependable operation. Available with shower-feed tank and brush.



UL LISTED EXPLOSION PROOF MAINTENANCE EQUIPMENT

Every model completely UL Listed for use in Class I, Group D and Class II, Group G hazardous locations.



EXPLOSION PROOF VACUUM CLEANER

Five models available with a complete selection of attachments for almost every wet and dry cleaning job in refineries, grain mills, arsenals, food plants, etc. Totally enclosed ¼ h. p. motor. Tank sizes from 6 to 55 gallons.



EXPLOSION PROOF FLOOR MACHINES

Designed for scrubbing and polishing all types of floors in hazardous atmospheres such as gas pumping stations, operating rooms, paint factories, etc. Every detail designed and built to the very highest safety requirements.

SEE THE COMPLETE LINE AT BOOTH 130 —NATIONAL SAFETY CONGRESS AND EXPOSITION

HILD

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1217 W. Washington Blvd., Chicago 7, Ill.
Factory Branches
250 E. 43rd St., New York 17, New York
4271 W. Third St., Los Angeles 5, Calif.
Export Dept.
10406 S. Western Ave., Chicago 43, Ill.

HILD FLOOR MACHINE CO., INC.
1217 W. Washington Blvd. NSN-10
Chicago 7, Illinois

Gentlemen:
Please send complete information on Hild Industrial Maintenance Equipment.

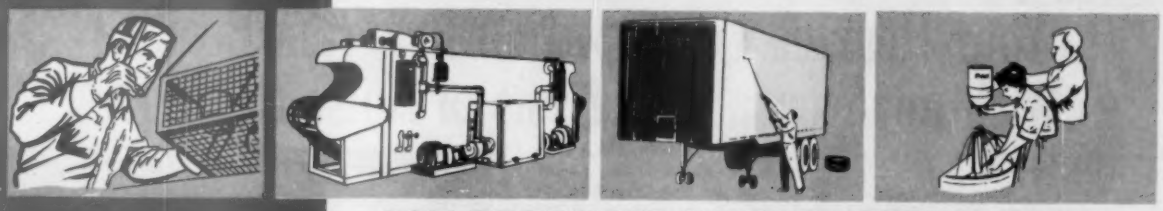
Signed_____
Firm_____
Address_____
City_____ Zone____ State_____

DIRECTORY OF EXHIBITORS

	BOOTH NUMBER	PAGE NUMBER
INDUSTRIAL ACOUSTICS CO., INC. **341 Jackson Ave., New York 54, N. Y.** Representatives: Roy Cherry, A. C. Hawthorne, Ellis E. Singer, Gordon N. Stowe, Jim Tibbetts Manufacturers—Audiometric examination room, technical publications & industrial hearing conservation program. Transistorized Rudmose Model RA-100 South Analyzer.	215	54
INDUSTRIAL GLOVES CO. **700 Garfield St., Danville, Ill.** Representatives: Jess A. Brewer, T. D. Clark, D. F. Didier, J. C. Finegan, B. J. Fullen, Wilbur Huckstadt, I. W. Millard, E. C. Rassett, John R. Redenbaugh, Elvin Shaffer, Neil B. Von Lanken Manufacturers—Leather, asbestos, duck, wool, wovengard, permaproof and aluminized duck and asbestos, finger guard.	16-17	—
INSTITUTE OF INDUSTRIAL LAUNDERERS, INC. **1833 Jefferson Place, N. W., Washington 6, D. C.** Representatives: Kenneth Barr, Sam Barry, Cecil Grimes, Herman Hoekstra, Jack Maag, John J. Roche Industrial launderers and cleaners. Flameproofing & renovating of industrial garments.	212	—
INSTO-GAS CORP. **998 E. Woodbridge Ave., Detroit 7, Mich.** Representatives: William F. Carroll, John L. Drennan, James F. Hirshfeld, William W. Steinert Manufacturers—Underwriters' Laboratories and Factory Mutual approved torches and furnaces.	7	—
INTERSTATE RUBBER PRODUCTS CORP. **908 Avila St., Los Angeles 12, Calif.** Representatives: C. R. Fitzsimons, R. S. Peterson, Charles Terry Manufacturers—Original and largest manufacturer of Trafficones.	195	—
IRON AGE SAFETY SHOE DIV., H. CHILDS & CO., INC. **1205 Madison Ave., Pittsburgh 12, Pa.** Representatives: Albert Belasco, Robert Burns, Harvey Childs, Jr., Jim Childs, (Mrs.) Grace Christie, Otis Farley, Bob Franklin, Chuck Garmann, Charles E. Goffe, Dick Gutowski, Bob Lohr, John McLaughlin, Andy May, Tom Potter, Richard Power, Don Waples Manufacturers—Complete lineman's and women's leather and rubber industrial safety footwear.	49-50	20-21
JACKSON PRODUCTS AIR REDUCTION SALES CO., DIV. OF AIR REDUCTION CO., INC. **31739 Mound Road, Warren, Mich.** Representatives: Truman Baldwin, Edward F. Cummiskey, A. C. Gilbert, B. C. Lee, Howard N. Simms, George W. Sloan, George A. Terbeek, C. E. Benner Manufacturers—Insulated electrode holders, cable connectors, face shields and goggles.	153-154	177
JOMAC, INC. **6128 N. Woodstock St., Philadelphia 38, Pa.** Representatives: John Douglas, Howard E. Eldridge, Patrick P. Kennedy, Michael A. Miller, Jack Seeburger, Kenneth Weiss, Robert A. Wolfe Manufacturers—Jomac Industrial work gloves, north PVC protective clothing and North PVC coated gloves.	2	142,204
JONES & CO. **861 Broad St., Providence 7, R. I.** Representatives: Kenyon Jones, Dwight M. Lowe Manufacturers—Full vision visor goggles.	57	85
JONES & LAUGHLIN STEEL CORP., WIRE ROPE DIV. **P. O. Box 320, Muncy, Pa.** Representatives: B. F. Besselman, O. H. E. Daley, H. H. Gingles, D. D. Hyland, I. N. Latimer, R. T. Rabe, J. O. Carpenter Manufacturers—Complete safety in lifting line: all standard & custom wire rope; single part, cable laid, & braided JalFlex slings; JalKlamp, JalLoc, hand splices; alloy chain slings; manila & synthetic ropes; hand & power hoists; synthetic & woven wire belt slings; custom engineering.	230-231	—
JUNKIN SAFETY APPLIANCE CO., INC. **3121 Millers Lane, Louisville 16, Ky.** Representatives: John I. Junkin Manufacturers—Power press guards, grinding wheel shields, stretcher equipment	89	219
JUSTRITE MFG. CO. **2061 N. Southport Ave., Chicago 14, Ill.** Representatives: J. N. Grimshaw, C. L. LaFountaine, R. Van, R. Bearce, C. S. Packer Manufacturers—Safety containers for flammable liquids, oily waste cans, electric lanterns	22	104
KAREL FIRST AID SUPPLY CO. **4342 Ogden Ave., Chicago 23, Ill.** Representatives: Edward Jarosz, Louis X. Karel, Tom Mackey Manufacturers & Distributors—Industrial hospital equipment & medical supplies. Exclusive distributors of the Converted collapsicot.	82	—
KELLEY PAINT CO. **1445 S. 15th St., Louisville, Ky.** Representatives: John R. Kelley, Edw. J. Moriarity Manufacturers—New CONVOY skid-proof permanent brush-on safety coating.	42	—
KEYSTONE VIEW CO. **Meadville, Pa.** Representatives: Paul L. Anderson, Frank Arnold, C. J. McLaughlin Manufacturers & Distributors—Occupational & driver vision test, lantern slide projectors.	150	31
KIDDE, WALTER & CO., INC. **675 Main St., Belleville 9, N. J.** Representatives: H. M. Akin, F. S. Buckley, W. J. Fielding, R. J. Fischer, Vernon Haack, W. E. Healey, Frank Jaeger, Rudolph Kaipus, J. E. McAllister, W. A. McFadden, S. C. Marsh, W. E. Morgan, Jr., J. W. Nichols, Dudley Styles, Truman Young, Warren Vodak Manufacturers—Fire detecting and extinguishing equipment, including new pressurized designs.	96-97	48
KIMBALL SAFETY PRODUCTS CO., THE **9310 Wade Park Ave., Cleveland 6, Ohio** Representatives: D. E. Kimball, Richard Vogler Manufacturers—Personal protective devices for industrial employees.	114	97
KLEIN, MATHIAS & SONS **7200 McCormick Road, Chicago 45, Ill.** Representatives: C. F. Castino, R. K. Colsant, S. P. Gavin, Robert Hoerger, Mathias A. Klein, M. A. Klein, Jr., Richard T. Klein, H. C. Segessman, A. L. Moore, B. E. Rogers, E. P. Suess, D. E. Swanson, H. B. Wilson, Jr., C. L. Woolsey Manufacturers—Linemen's safety equipment and tools.	65-66	91
KNAPP BROTHERS SHOE MFG. CORP. **173 Spark St., Brockton 61, Mass.** Representatives: Emil M. Bistow, Gordon P. King, C. E. Knapp, Jack Sahling Manufacturers—Safety Shoes.	220	184

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PAX
for MEN, MACHINES and your PRODUCTS



PAX PRODUCTS ASSURE KEEPING BOTH MEN AND EQUIPMENT AT WORK

WHEN YOU BUY A PAX PRODUCT YOU KNOW IT'S GOOD.
PAX INDUSTRIAL CHEMICALS GIVE COMPLETELY SATISFACTORY RESULTS IN THE PROCESSING OF YOUR PRODUCTS. PAX SKIN CARE PRODUCTS GIVE PROTECTION AND SATISFACTION TO YOUR PERSONNEL WHO HANDLE AND MANUFACTURE YOUR PRODUCTS

PAX

PAX CP-2 DISPENSER for both Granulated and Cream skin care products.

G. H. PACKWOOD MANUFACTURING COMPANY
60-10 1545 TOWER GROVE AVE. SAINT LOUIS 10, MISSOURI

Sounding Board

News of Interest in the Field of Noise Control

Your Hearing Conservation Program Begins With an Accurate Analysis of Noise-Exposure

Because prolonged exposure to harmful noises cause early-induced hearing loss which is not easily discernible, the accurate analysis of these noises is a vital part of a proper Hearing Conservation Program.

Accurate Sound Analyzer Necessary

The measurement of noise and its analysis, (the breakdown of noise into its various frequencies), calls for precision instruments and techniques. To make the function of noise measurement and analysis easy for non-technicians, the Rudmose Instrument Co. has designed a new combination sound level meter and analyzer which furnishes accurate sound level measurements and octave analysis with a simplicity of operation making it virtually impossible to obtain incorrect readings.

Also Calibrates Audiometers

As hearing tests are the most important part of a hearing conservation program, the audiometer output must be checked routinely for accuracy of calibration. The Rudmose R.A. #100 Sound Analyzer is equipped with an earphone coupler for checking the audiometer's accuracy of calibration. Circle 65.

Audiometers and Audiometric Rooms, Too

The Rudmose R.A. #100 Sound Analyzer is an addition to the equipment distributed by Industrial Acoustics Company, Inc., for instituting a complete and effective Hearing Conservation Program. The Rudmose Automatic Audiometer is available for rapid and accurate hearing tests; and IAC Audiometric Examination Rooms for providing a proper environment for obtaining accurate audiograms. Circle 66.

Control of Noise a Factor

Another important part of any Hearing Conservation Program is the control of noise at its source. This is accomplished by the use of IAC complete or partial noisy machinery enclosures or by protecting personnel with IAC "Quiet Rooms" to shield workers from damaging noise. Circle 67.



Measuring noise level of a machine with the new Rudmose #100 Sound Analyzer. The lightweight, completely transistorized unit is convenient for carrying.



R.A. #100 Sound Analyzer being used to check audiometer. The earphone coupler transmits audiometer signals into microphone for checking.

"STEEL CLAD" TELEPHONE BOOTHS KEEP NOISE OUT–CONVERSATION IN



Wall Model "NOISHIELD" Telephone Booth installed in a machine shop.

IAC "NOISHIELD" telephone booths are engineered for high acoustic efficiency to provide ease of conversation in noisy locations or privacy of conversation where desired.

Featuring rugged steel-clad construction, attractive finishes and low cost, these booths are ideal for factories, public buildings, terminals, schools, laboratories, restaurants, stores and for all noisy locations. IAC "NOISHIELD" booths are also available in floor models. Circle 75A.



Using the Rudmose Automatic Audiometer, subject conducts his own hearing test seated within an IAC Audiometric Examination Room.



An IAC machinery enclosure controls noise levels by isolating noisy equipment.

Other literature available:

"Noise-Lock" Doors — Circle 68.
"Quiet" Rooms for Supervisory Personnel — Circle 69.
Control Rooms — Circle 70.
Silencers for Air Handling Systems — Circle 71.
High Intensity Noise Chambers — Circle 72.
"MINI-SIZED" Test Chambers — Circle 73.
Mufflers & Industrial Silencers — Circle 74.
Sound Isolation Rooms — Circle 75.

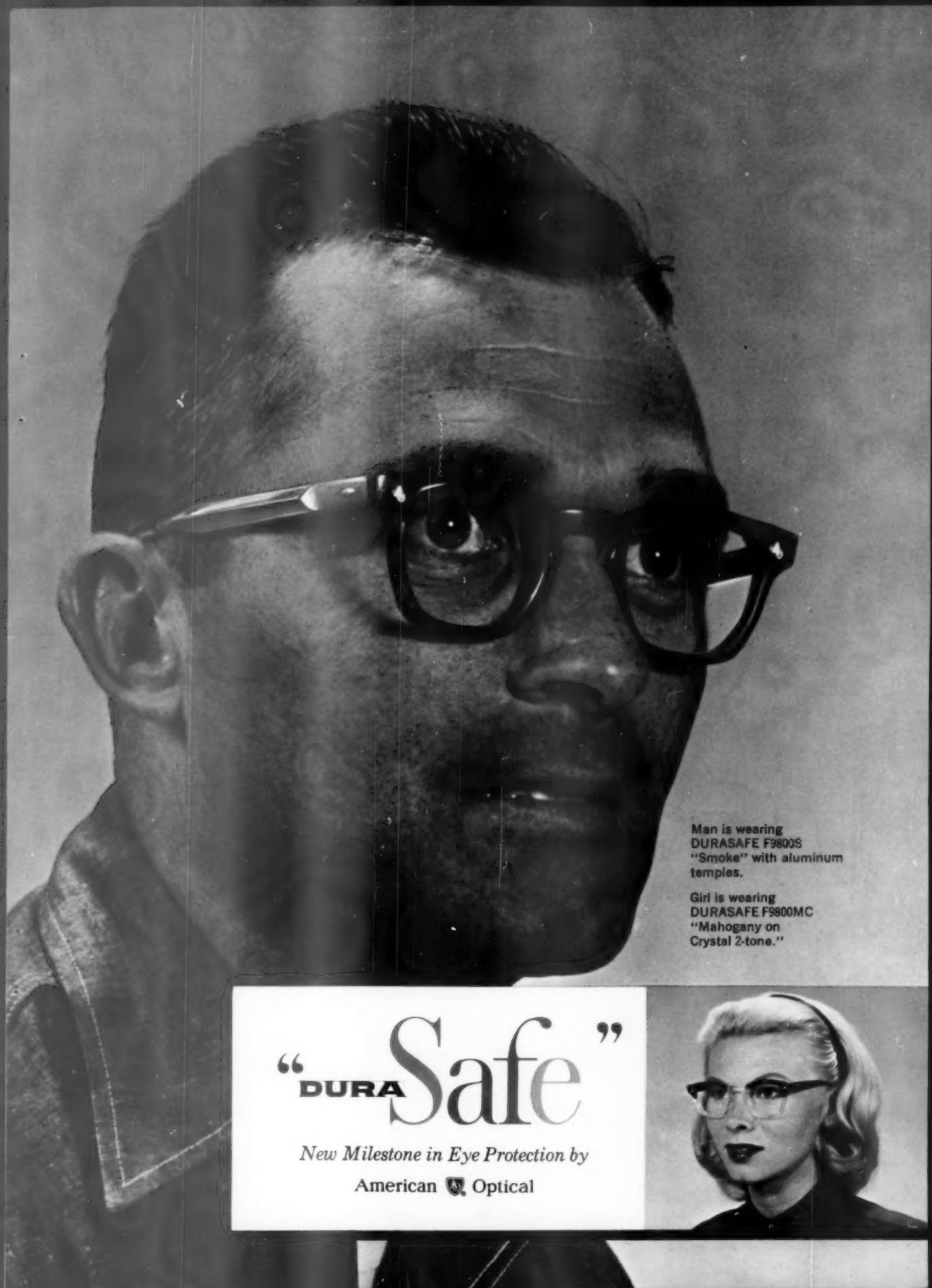
Industrial Dept. NS-10
INDUSTRIAL ACOUSTICS COMPANY, INC.
341 Jackson Avenue New York 54, N.Y.
Certain Territories CYpress 2-0180
Available for Qualified Representatives

Please send data on: 65 66 67 68 69 70 71 72 73 74 75 75A

Name _____ Title _____
Company _____
Address _____
City _____ Zone ____ State _____

Circle Item No. 33—Reader Service Card

Circle Item No. 34—Reader Service Card →


Man is wearing
DURASAFE F9800S
"Smoke" with aluminum
temples.
Girl is wearing
DURASAFE F9800MC
"Mahogany on
Crystal 2-tone."
"DURA Safe"
New Milestone in Eye Protection by
American Optical

"DURA Safe"

Eye Protection and Correction at Their Finest!

SUPERBLY ENGINEERED!
Designed for maximum safety, built to provide the extra margin of security that can never be measured in dollars and cents when priceless vision is at stake. Lenses, frames and components are of unquestionable, premium quality.

UNEXCELLED FITTING QUALITIES!
Durasafe provides the necessary range of bridge and eye sizes *to fit everyone* — with and without side shields — in safety R$_x$ or Plano glasses.

DESIGNED FOR WEARER ACCEPTANCE!
Durasafe gives workers pride of ownership and wearership! Available in a variety of colors and combinations to please everyone.

EYE PROTECTION'S FINEST INVESTMENT!
Durasafe makes eye programs *work* — saves you money by preventing eye accidents — reduces your costs. Remember, the slightest eye injury costs more than the goggle (or safety glasses) that prevents it.

For complete details, write for Durasafe Catalog No. S-1013

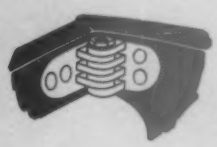
It pays to insist on the finest. Insist on AO — your surest protection.

American Optical
COMPANY
SAFETY PRODUCTS DIVISION
Southbridge, Massachusetts

Always insist on AO Trademarked Safety Products.

Safety Service Centers in Principal Cities

Featuring these outstanding safety advances



7 Barrel Hinge — 40% increase in strength at the most vulnerable spot — where frame and temple are joined.



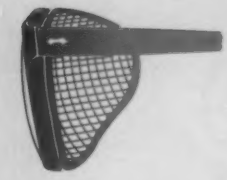
Duragrip Screw Construction — Keeps frame temples tight permanently, screws cannot fall out.



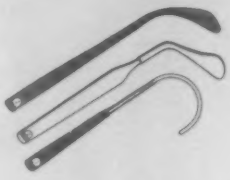
Wider End Pieces — more strength because of greater temple surface.



"Lock-A-Lens" — New safety ridge locks lens in frame — locks trouble out.



"Breeze Catcher" — New safety-comfort in non-reflecting mesh side shields.



Wider Frame Temples — stronger (minimizes breakage), more comfort, conform better to head contour.



Much Sturdier Frame — wider for extra strength.

Your Surest Protection . . . AO SURE-GUARD Glasses

S-1058

9-60





DIRECTORY OF EXHIBITORS

	BOOTH NUMBER	PAGE NUMBER
KUNZ, J. GLOVE CO. **2141 W. North Ave., Chicago 47, Ill.** Representatives: William Hampel, Edward P. Yauch, Joseph A. Yauch Manufacturers—Linemen's, bridgemen's and welder's quality gloves.	156	—
LAWTER CHEMICALS, INC. **3550 Touhy Ave., Chicago 45, Ill.** Representatives: Richard Hacker, James F. Hall, Jr., Hack C. Heath, Henry Ferguson Manufacturers—HI-Viz fluorescent paints for municipal and industrial safety markings	209	93
LEGGE, WALTER G. CO., INC. **101 Park Ave., New York 17, N. Y.** Representatives: George A. Arnold, J. Paul Glenn, Walter G. Legge, George A. Parenty, John Walker Manufacturers—Safety floor maintenance materials; germicidal cleaners, conductive coating; static eliminators.	36	188
LEHIGH SAFETY SHOE CO. **First & Minor Sts., Emmaus, Pa.** Representatives John Ellis, F. B. Griswold, Fred Hoppes, Miller Hunter, B. O. Longnecker, Arnold F. Warner Manufacturers—Leather and rubber safety footwear.	87-88	58-59
LOWERY BROTHERS, INC. **9332 S. Anthony Ave., Chicago 17, Ill.** Representatives: Fred A. Boden, Archie J. Lowery, John W. Lowery, Robert Martz, T. J. McLarty Manufacturers—Wire Rope	169	—
McAN, THOM SAFETY SHOE DIV. **25 W. 43rd St., New York 36, N. Y.** Representatives: Albert Duncan, Bob Bell, Martin Bitler, Troy Corder, Herbert Kelley, George Kiesewetter, Marvin Mudd, Edwgrd Serrapede, Jack Speer, James Stewart, Albert Taber, J. Sidney Wakely, George Weyl, John Yudt, Pete Zambito, Joseph Steele, Harry Caldwell, William J. Smith Manufacturers & Distributors—Safety Shoes.	118	88-89
McDERMOTT, JULIAN A. CORP. **1639 Stephen St.** **Ridgewood 27, L. I., N. Y.** Representatives: Harry Davis, Jr., Robert Fleming, Julian A. McDermott Manufacturers—Warning and safety lighting for municipal industrial, utility and aviation use.	37	—
McKAY CO., THE **1005 Liberty Ave., Pittsburgh 22, Pa.** Representatives: John Bradbury, T. S. Collins, J. W. Douglass, R. M. Gee, H. F. Reid, J. W. Thompson Manufacturers—Industrial chain, fire chains, arc-welding electrodes, stainless and alloy wire.	312	111
MAICO ELECTRONICS, INC. **Maico Bldg., 21 N. 3rd St., Minneapolis 1, Minn.** Representatives: Arne T. Darbo, James C. Keyes, Mrs. Havie Watson Manufacturers—Complete line of auditory equipment for industrial hearing test program.	223	219
MARSH & McLENNAN, INC. **231 S. LaSalle St., Chicago 4, Ill.** Representatives: Fred J. Boles, Ralph J. Crosby, George Danke, C. S. Grant-Watters, Robert W. Hutchinson, Robert W. Kimball Insurance Broker and Agencies.	134-135	—
MARTINDALE ELECTRIC CO. **1375 Hird Ave., Cleveland 7, Ohio** Representatives: J. W. Ackerman, Roy E. Biersch, Wm. N. Osbun, Jr., J. J. Rick Manufacturers—Protective dust masks, eye protector, face shields, safety electric test instruments.	229	—
MEDICAL SUPPLY CO. **1027 W. State St., Rockford, Ill.** Representatives: Richard G. Babbitt, Douglas M. Boyd, Jack P. Campbell, Harry J. Ellis, Norman B. Hall, A. F. "Del" Johnson, Robert D. Mulhall, Paul W. Saunders, Gordon P. St. Clair Manufacturers—First aid kits and refills, stretchers, blankets, snake bite kits, salt tablets, poison ivy treatments, burn spray treatments.	136-137-138	143
METROPOLITAN LIFE INSURANCE CO. **1 Madison Ave., New York 10, N. Y.** Representatives: Melvin M. Udel, M.D., Elizabeth Kasey, Thomas J. Berk "Useful materials for use in Community health and safety program."	139	—

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New "Footshield" Safety Shoe



PROTECTS ON TOP

PROTECTS UNDERNEATH



WITH SOLES AND HEELS OF

PARACRIL OZO

The new Lehigh "Footshield" Safety Shoe is protected underneath with soles and heels of PARACRIL® OZO. A specially developed blend of synthetic rubber and vinyl plastic, PARACRIL OZO is the toughest material made yet for soles and heels. PARACRIL OZO is completely non-marking, highly resistant to deterioration by abrasion (even steel chips), oils, and chemicals. It provides lasting comfort. Soles and heels of PARACRIL OZO *outwear all others!*



WHENEVER YOU BUY SAFETY SHOES LOOK FOR THIS TAG

Naugatuck Chemical
Division of United States Rubber Company
Naugatuck, Connecticut

US RUBBER



See here! *No light shows through. The instep guard is supporting the I-beam!*

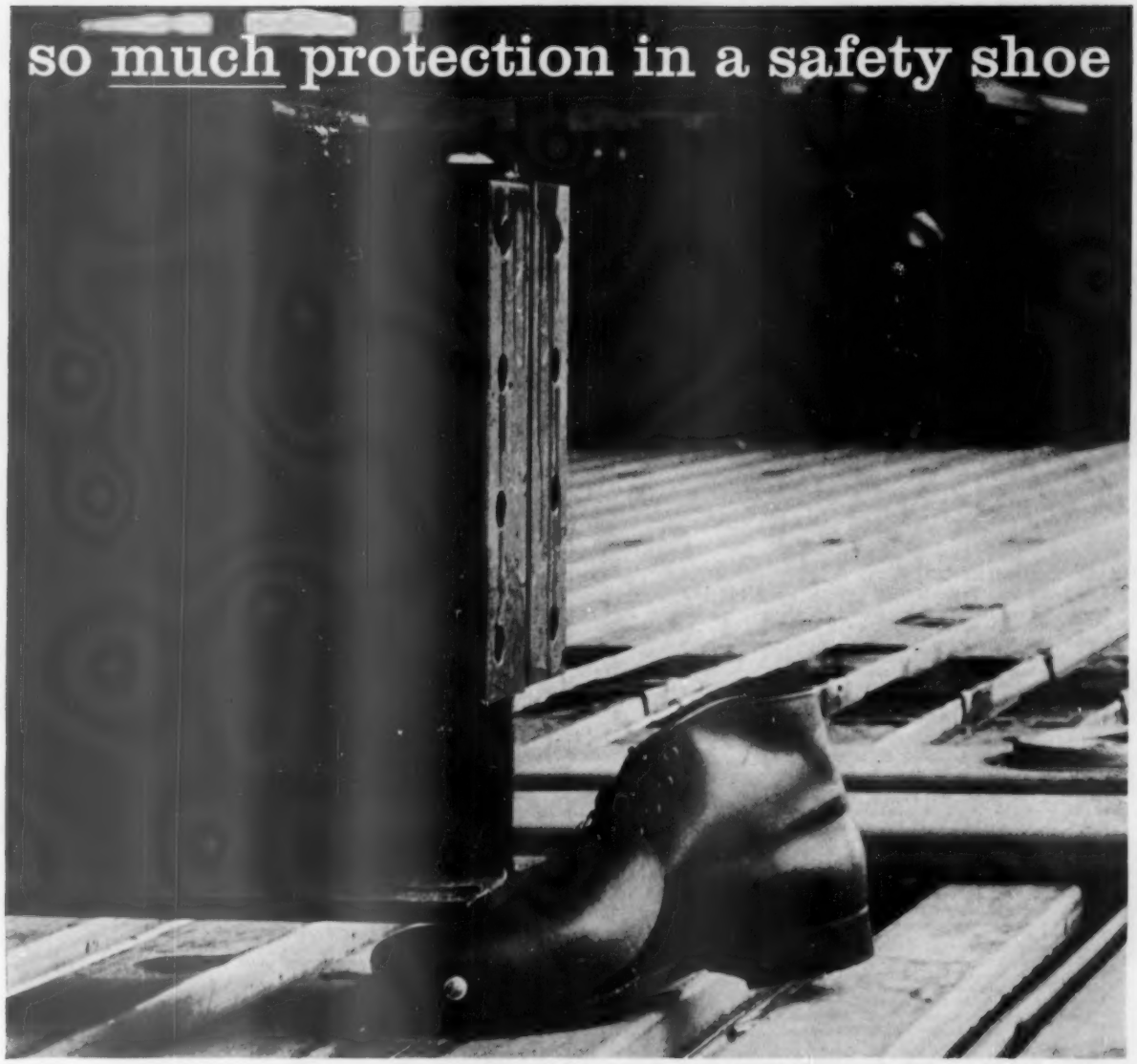


LEHIGH
"footshield"
Stock No. 1515

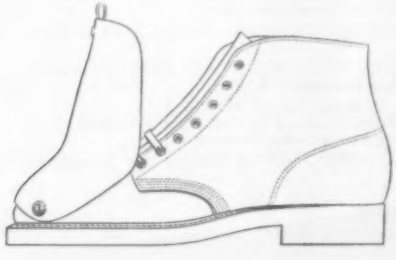
"The shoe that does for FEET what the steel cap did for TOES!"

LEHIGH

so much protection in a safety shoe



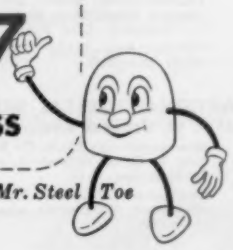
FEET are injured more often than toes – because, until now, there never has been a *shoe* – practical and comfortable for all day wear–that does for the *instep* what the steel cap does for *toes*. This is it: Lehigh's new "Footshield". It weighs little more than a sturdy sports brogue. It has a new Nitrl-Vinyl sole that is uncannily resistant to abrasion, acids, oil, even steel chips and shavings. The new instep guard is *hinged* to the steel toe cap for added strength, flexibility and ease of pull-on. The sculptured guard leaves no open spaces–*protects much more of the foot* than any other shoe yet offered.



...just one of a host of innovations in foot protection you will see

AT CHICAGO BOOTH 87

NATIONAL SAFETY CONGRESS



Mr. Steel Toe

SAFETY SHOE CO., INC. • *EMMAUS, PA.*

DIRECTORY OF EXHIBITORS

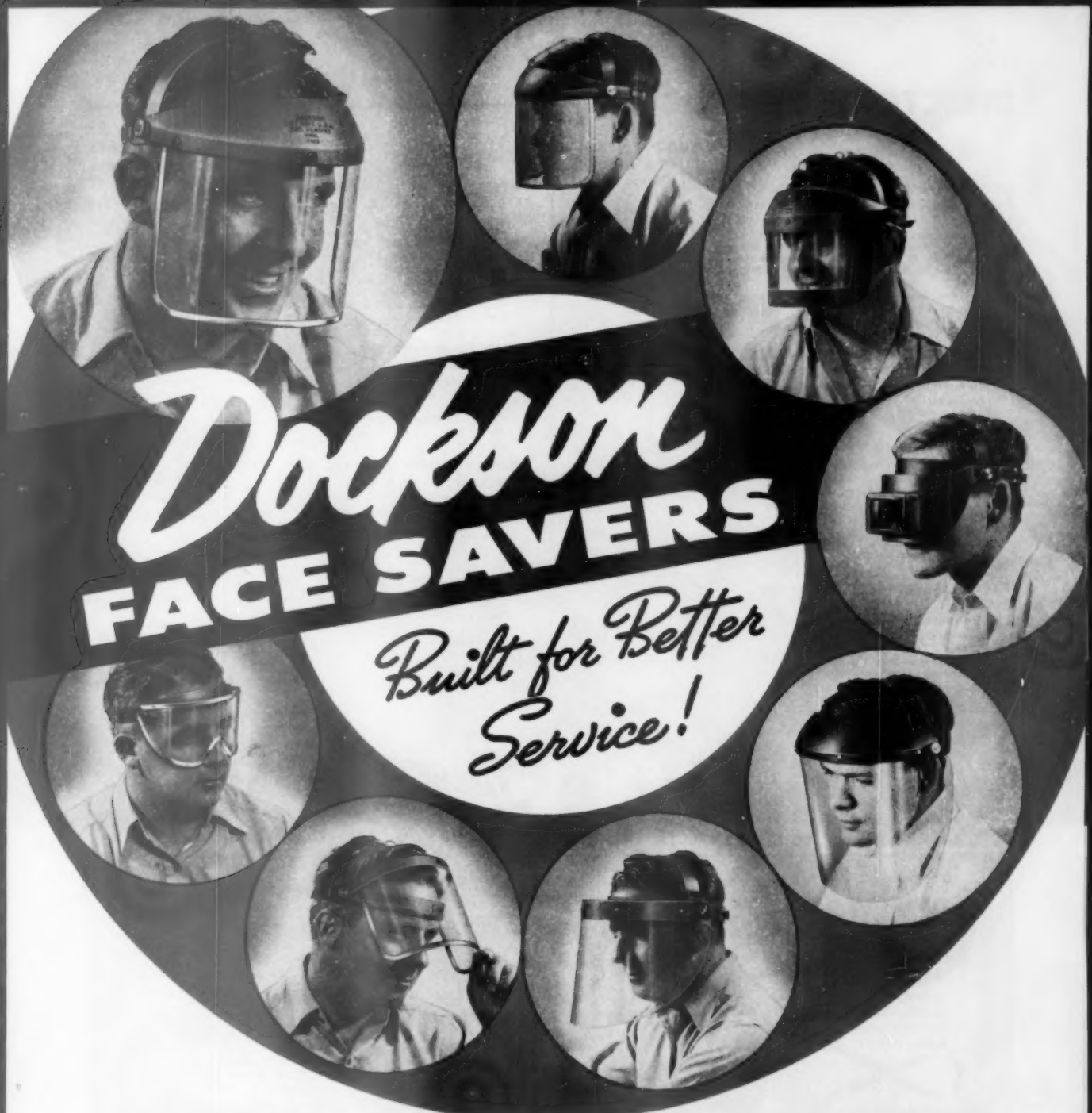
	BOOTH NUMBER	PAGE NUMBER
MEYER MACHINE, INC. **P. O. Box 131, Red Wing, Minn.** Representatives: Norman E. Davis, (Mrs.) Roy E. Meyer, Roy E. Meyer Manufacturers—Tulito safety clamp—Save A Life—Eliminate a Fall.	314	230
MICRO SWITCH A DIV. OF MINNEAPOLIS-HONEYWELL REGULATOR CO. **Chicago & Spring Sts., Freeport, Ill.** Representatives: F. N. Burt, Dean K. Fryer, I. F. Glosup, O. F. McIntyre, J. J. Maher, W. H. Taylor, G. E. Van Heule Manufacturers—Safety interlock switches and electric controls for power machines.	163-164	—
MILBURN CO. **3246 E. Woodbridge, Detroit 7, Mich.** Representatives: Glen E. Leach, Mary D. Leach, William C. Weber Manufacturers—Ply skin protective creams, ply garb safety & protective clothing, ply gloves plastic, coated work gloves, play waterless hand cleaner.	59	—
MILLER EQUIPMENT CO., INC. **13th & New Sts., Franklin, Pa.** Representatives: Norman Cobb, Dave Friggle, R. J. Miller, Joe Nelms, E. C. Shawgo, Jim Cowan Manufacturers—Lineman and industrial safety belts, webbing slings, canvas products.	144-145	44
MINE SAFETY APPLIANCES CO. **201 N. Braddock Ave., Pittsburgh 8, Pa.** Representatives: D. E. Albert, D. M. Ankeny, L. J. Bowker, E. C. Brainerd, K. S. Butler, V. W. Buys, W. T. Cofer, Jr., G. E. Darroch, J. B. Davies, C. R. Dever, G. H. Deike, Sr., G. H. Deike, Jr., C. M. Donahue, W. H. Gates, H. N. Gruber, E. F. Hahnfeldt, J. F. Ham, K. W. Hanlon, N. W. Hartz, W. H. Hoover, F. A. Hornsby, F. A. King, W. G. Kulesz, J. W. McCrackin, D. F. McElhattan, C. H. Mehaffey, E. W. Merry, C. V. Miller, J. S. Miller, Jr., J. S. Moore, Rowland Morris, G. L. Morse, R. A. Pohl, H. E. Redenbaugh, J. T. Ryan, Jr., C. H. Sanderson, L. N. Short, Jr., H. N. Trice, D. F. West, E. M. White, W. P. Yant, J. E. Zatek, T. J. Barr, F. B. Dunbar, L. E. Fancourt, R. J. Fay, R. V. Ferrari, T. K. Feyder, R. V. Fitzpatrick, J. H. Helm, C. A. Hofmeister, R. M. Ladick, W. S. Langmade, C. A. Linden, A. M. Lundin, J. W. Meehan, Jr., M. L. Moll, G. M. Morrison, C. A. Nickell, J. P. Repp, W. M. Rock, W. J. Ryan, B. G. Tarkington, C. B. Theiling, C. T. Wesson, S. R. Whited, G. L. Woolcock, R.F. Yule Manufacturers—Complete new line of M-S-A Sightgards and full line of safety equipment for every industry.	83-84-85-86	74-75
MINNESOTA MINING & MFG. CO. **900 Bush Ave., St. Paul 6, Minn.** Representatives: T. E. Barron, E. P. Davis, C. L. Fox, W. R. Kircher, R. J. Patton, M. J. Regan, C. T. Vangsness Manufacturers—Of heat reflective "Scotchshield" brand chemical fabric. Used in protective clothing for fire fighters & industries with heat problems.	185	—
NATIONAL CHEMSEARCH CO. **1550 Page Industrial Blvd.** **St. Louis 32, Mo.** Representatives: Martin Grossman, Irvin Levy, Leonard Rosenbaum, Sherwin Schilling, Martin Goldberg, Clay Raynes Manufacturers—Safety solvents and other safety chemicals.	186	108
NATIONAL MEDICAL SUPPLY CO. **6121 W. Belmont Ave., Chicago 34, Ill.** Representatives: Mary C. Barton, R.N., William F. Exner, William S. Hampton, Rosalyn S. McBridge, R.N. Distributor—Industrial first aid supplies, equipment, instruments, pharmaceuticals and chemicals.	235	—



	BOOTH NUMBER	PAGE NUMBER
NEWCO MFG. CO., INC. **P. O. Box 5936, 3636 Main St.** **Kansas City 11, Mo.** Representatives: W. W. (Budge) Abernathy, (Mrs.) Jack Gale, Jack G. Gale, J. Gillespie, Paul H. Krull, William (Bill) Lindsey, Kerm Locke, Sherburne Rand, Frank P. Wilson Manufacturers—Wire rope fittings, safety hooks, choker hooks, clamps.	187-188	102
NICHOLS ENGINEERING CO., THE **3816 W. Grand Ave., Chicago 51, Ill.** H. Nichols Manufacturers—Tank car and tank truck loading and unloading platforms. Representatives: Bennet F. Goldman, Samuel	309	82
NOTIFIER CORP. **3700 N. 56th St., Lincoln 8, Nebr.** Representatives: Oliver H. Bell, Henry Burgess, Jack Damke, (Mrs.) Margaret O. Joy, Oliver T. Joy, Jay Mann, Donald Nielsen Manufacturers—Automatic fire detection sprinkler supervision, security and plant protection systems.	320-321	—
OCCUPATIONAL HAZARDS MAGAZINES **812 Huron Road, Cleveland 15, Ohio** Representatives: E. M. Joseph J. Arlen, Marsh, Ivan Louis Weinstock, Peter J. Sheridan Publishers	54	—
OHIO CHEMICAL & SURGICAL EQUIP. CO. DIV. OF AIR REDUCTION CO., INC. **1400 E. Washington Ave., Madison 10, Wis.** Representatives: Henry W. Beck, R. C. Berry, S. G. Brown, T. G. Cunningham, L. E. Guentz, Charles A. Simpler Manufacturers—Complete array of modified E & J (R) life-saving resuscitative equipment.	322	179
ONOX, INC. **121 Second St., San Francisco 5, Calif.** Representatives: L. C. Egner, Kenneth J. Ferrell, Robert deFremery Manufacturers—Onox foot sprayers, footmats and Onox solution for athlete's foot prevention.	14-15	—
OSBORN MFG. CORP. **P. O. Box 271, Warsaw, Ind.** Representatives: R. E. Osborn, Ann Taylor Manufacturers—Safety pliers and tongs for feeding punch presses.	226	109

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Each Dockson Face Shield is designed for maximum protection of the wearer on his specific job. Only the best materials are used to assure longest possible service life.

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DIRECTORY OF PRODUCTS

	BOOTH NUMBER	PAGE NUMBER
OXY-GEAR, INC. **Suite 1007, 30 N. LaSalle St., Chicago 2, Ill.** Representatives: A. M. Berets, T. Cruthers, Anthony Franze, Edward Hmura, Harry Hmura, W. H. Kurtz, E. A. Lovy, Ezra Ressman, Earl M. Spears, Monte Tomerlin, Joseph Walam Manufacturers—Portable emergency oxygen inhalator kits, with safety control and refill adapters.	325	—
OXYGEN EQUIPMENT & SERVICE CO. **8335 S. Halsted St., Chicago 20, Ill.** Representatives: Grover D. Harris Manufacturers—Reviv-a-life resuscitators and oxequip inhalators.	319	—
PACKWOOD, G. H. MFG. CO. **1545 Tower Grove Ave.** **St. Louis 10, Mo.** Representatives: Art Carter, Stanley DeGroote, M. S. Gravely, Dick Lamping, A. J. McLaughlin, Dick Taft Manufacturers—Pax safety industrial skin Cleansers, dispensers, and maintenance cleaning compounds.	32	53
PAC-KIT SAFETY EQUIPMENT CO., INC., THE **175 Greenwich Ave., Greenwich, Conn.** Representatives: Cecil R. Brown, Cecil V. Brown Manufacturers—Unit type first aid kits; marine first aid kits; snake bite kits and aircraft kits.	39	158
PATENT SCAFFOLDING CO., INC., THE **1550 N. Dayton St., Chicago 22, Ill.** Representatives: Nels F. Borgaard, Joseph Judge, Lee M. Kabbaz, Robert J. Mohr, Chester R. Rakowski Manufacturers—Rolling safety step ladders, wood, aluminum and magnesium safety ladders, suspended, sectional steel, tubular steel and aluminum scaffolding, sidewalk protection canopies, steel grandstands and fold-a-way scaffold.	88-89	191
PETERSEN ENGINEERING CO., INC. **460 Kifer Road, Santa Clara, Calif.** Representatives: George E. Glahn, William C. Gooch, Jackson T. Isbell Manufacturers—PENGO tension strigers, PENGO earth augers and other line construction equipment.	165-166	—
PIONEER RUBBER CO., THE **Tiffin Road, Willard, Ohio** Representatives: J. H. Gibson, John R. Jones, Jack Knight, True Read, Alice E. Williams Manufacturers—Gloves; stanzoil, stanflex, Pacemaker, sheergrip, nimble fingers liquid proof industrial gloves.	19	—
PORTABLE LIGHT CO., INC., THE **216 William St., New York 38, N. Y.** Representatives: Joe Menzella, Robert Steeber Manufacturers—Emergency, Warning and marine searchlights. Sirens and Air horns.	155	—

—To page 67

Bashlin's *Linemen's Choice* SAFETY EQUIPMENT



W. M. BASHLIN COMPANY
GROVE CITY 3, PA.



"Acco's New Hi-Pli Slings Handle like Hemp!"

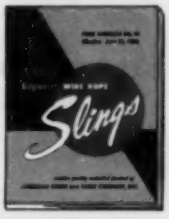
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- ***They combine the pliability of hemp and the strength of steel***
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- ***Completely free of crankiness, they're the kind of slings your men like to work with***

The amazing pliability of Hi-Pli slings comes from ACCO's arrangement of six ropes around one. They have patented Dualoc endings which double-lock the sling ends. They have a durable, clean Galacco finish which resists rust.

Hi-Pli slings, like all ACCO slings, are registered safe. This is your assurance that they have been factory proof-tested at twice load-carrying capacity before they are issued an ACCO tag and certificate of registration.

Ask your distributor about Hi-Pli slings now—or write us at Wilkes-Barre, Pa., for our new **Catalog 10** which lists the strengths and weights of the full Hi-Pli, Strand-Laid and Braided Sling lines plus information about ACCO attachments and fittings.



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A GUIDE TO SELECTION AND USE OF PROTECTOSEAL EQUIPMENT FOR THE SAFE STORAGE, HANDLING AND USE OF FLAMMABLES

DRUM STORAGE AND TRANSFER



DRUM VENT

For side bung installation. Relieves pressure build-up, provides vacuum relief for 30 and 55 gal. storage drums. Flame arrester built in. FM approval*



END BUNG DRUM VENT

For automatic pressure and vacuum relief of 30 and 55 gal. drums. Equipped with flame arrester. FM approval*



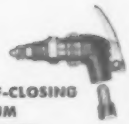
COMBINATION FILL AND VENT BUNG FITTING

Flame arrester permits safe refilling. Automatic pressure and vacuum relief. FM approval*



DRUM TRANSFER PUMP

With built-in fire baffles for safe dispensing from 30, 55 gal. drums. Steady, even liquid flow. UL-FM approval**



SELF-CLOSING DRUM FAUCETS

Rigid or self-positioning types. Fire baffle and strainer built in. FM approval*

SAFE STORAGE OF FLAMMABLES IN PLANT



SAFETY STORAGE CAN
UL-FM approval*

- Double Wall Flame Arresters
- Automatic Pressure Relief
- Liquid-tight, automatic closing caps

Protectoseal Safety Containers are made in a wide range of types and sizes. Particular attention to users convenience and fast, easy operating performance make Protectoseal Safety Storage Cans and Safety Dispensing Cans the choice of discriminating safety equipment buyers. Standard cans are made of Terne Plate. Also available in Stainless, Monel Metal and Hot Tin Dipped to meet special conditions.



SAFETY DISPENSER CAN
UL-FM approval*

FLAMMABLES IN THE LABORATORY



OVAL SHAPE SAFETY CANS

Oval shape Safety Storage and Dispensing Cans require far less storage space, permit more containers to be stored in less area. When grasped by handle, can is in correct pouring position without changing grip. Fire protected filling and pouring openings. Leak-tight seals with automatic pressure relief. Terne Plate is standard; available in Stainless Steel with Teflon cap gasket. FM approval*

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Designed for easy, accurate dispensing of measured amounts of liquid into small capacity receiving containers. Available with Tilt Frames for bench top or floor use, or for vertical wall mounting. Equipped with faucets for slow or fast dispensing. Faucet is brought into correct pouring position by tilting the can. Can returns to upright position when released. Cans are 5 or 10 gallon capacity. FM approval*



PRODUCTION and PARTS WASHING



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For quick, one-hand moistening of swab, brush or cloth. Depressing spring loaded dasher pumps measured quantity of fluid into cup. Release and excess drains back into can. 5 sizes—dashers 1" to 7" dia. FM approval*

WASH TANK

Two handled perforated basket for fast, easy parts agitation. Self-draining by resting basket on lugs at top of tank. Renewable fusible link melts at 160°F. automatically drops cover to snuff out fire. 4 sizes ranging from 8½" x 8½" x 9¾" to 15" x 15" x 15". FM approval*



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Keeps workers hands out of solvent. Removable parts basket has handle. Depress spring mounted fire baffle dasher for solvent, release to drain. Without basket, large cloths or swabs may be saturated. 3 pint capacity. Basket and dasher — 5⅝" dia. FM approval*



DISPOSING OF FLAMMABLE WASTE



LIQUID DISPOSAL CAN

Provides safe, convenient intermediate station for receiving and storing waste flammable liquids. Spout cap opens wide and large receiving opening facilitates quick disposal of liquids from laboratory beakers, etc. without a funnel. Cap may be locked open. Available with Terne Plate or Stainless Steel body. Opening protected by flame arrester. Two sizes: 2 gal. and 5 gal.

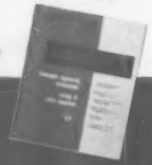
OILY WASTE CAN

For safe disposal of oily waste or flammable soaked materials. Self-closing cover prevents spontaneous combustion. Foot treadle operated, square shape gives maximum stability and capacity in minimum floor space. Raised bottom with air holes provides ventilation, prevents vapor pockets from forming. 5 sizes: 6, 8, 10, 14, 21 gallons. UL-FM approval**Also available—detachable Self-Closing Drum Cover to convert used 30 or 55 gallon drum or trash can to safe receptacle for combustible materials.



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**Underwriters' Laboratories

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NEW...with easy-fit bridge



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■ Now . . . a new Pulmosan *exclusive* . . . "executive" styled safety spectacles, as flattering and comfortable to wear as the smartest dress glasses. New simplified easy-fit bridge and nose piece *completely* eliminate cumbersome pads. Just two eye sizes fit all workers. Choice of smoke or two-tone color styles; with or without side shields. Solidly constructed for dependable eye-protection, new Pulmosan Safety Glasses make it *smart to be safe!*

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PULMOSAN STOPS Accidents

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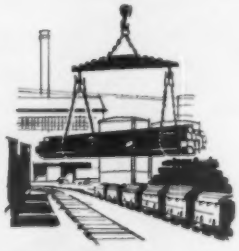
Long Haul

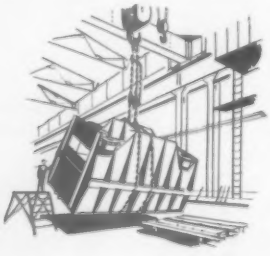


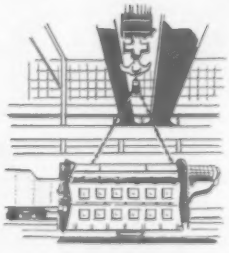
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PORTO-CLINIC INSTRUMENTS, INC. **298 Broadway, New York 7, N. Y.** Representatives: Jack A. Harwood, Theodora Kole, Joseph Milanese, Herbert J. Sheppard Manufacturers & Distributors—Driver testing and training equipment and visual aids for driver and traffic safety.	28	—
POSITIVE SAFETY MFG. CO., THE **4408 Perkins Ave., Cleveland 3, Ohio** Representatives: K. W. Fobes, W. J. Marshall, Miss Eliza Reed, Geo. A. Short Manufacturers—Power press guards.	38	212
PRAIRIE STATE PRODUCTS CO. **3822 Lawrence Ave., Chicago 25, Ill.** Representatives: S. S. Blumenthal, George Blumenthal, H. L. Hiett Manufacturers—Illustrated and general safety signs corner guards and flashing sign units.	58	247
PROGRESS INDUSTRIES, INC. **434 Allens Ave., Providence 5, R. I.** Representatives: David Freedman, Henry Schwartz Manufacturers—Savue wrap around safety goggles.	233	—
PROTECTOSEAL CO., THE **1920 S. Western Ave., Chicago 8, Ill.** Representatives: W. E. Belt, N. E. Calhoun, P. J. Fairman, R. P. Gaffke, G. T. McCarty, J. J. McGinnis, D. P. Morgan, C. R. Seim, A. M. Stevens, Jr., S. L. White, G. Zimmerman Manufacturers—Fire prevention equipment for flammable solvents.	105-106	64
PULMOSAN SAFETY EQUIP. CORP. **644 Pacific St., Brooklyn 17, N. Y.** Representatives: Don Ferris, Lawrence Foley, Ed Haas, Jr., Theodore Huston, George Jennings, Louis Lasker, Ed Lindeman, Emil Miksch, Paul Miles, Angelo Pisani, Greg Poulin, Jack Rockel, Richard G. Russell, Berry Temple, W. Sessel Waters, Howard M. Weiss, Samuel Weiss, Rudy Weldy, Jr. Manufacturers—Respirators, eye protection, helmets, protective clothing, asbestos and leather gloves.	63-64	65
PUTNAM ROLLING LADDER CO., INC. **32 Howard St., New York 13, N. Y.** Representatives: Jack Feinstein, H. J. Monsees, Warren R. Monsees, Harmon Poe Manufacturers—Fiberglass extension and step ladders, and oak rolling ladders.	174	50
RACINE GLOVE CO., INC. **Box 38, Rio, Wis.** Representatives: O. Reed Bigelow, Andrew J. Campbell, Kenneth Ehrhardt, Jack Knight, Frederick P. Otting, A. P. Yonis Manufacturers—Gloves, apparel, protective equipment—leathers, asbestos and steel reinforced.	199	—
RADIATOR SPECIALTY CO. **1400 W. Independence Blvd., Charlotte 1, N. C.** Representatives: Herman Blumenthal, Dave Harb, David Hoffman, R. M. Johnson, E. C. Festa Manufacturers—Safe-T-Cone rubber and plastic, traffic control systems for school, highway and factory traffic systems.	178	—
RANDOLPH LABORATORIES, INC. **1450 Frontage Road, Northbrook, Ill.** Representatives: Robert J. Boyland, John Hallisey, George Kuhlmann, Donald D. Roberts, Glen S. Robert, Bill Yost Manufacturers—Carbon dioxide fire extinguishers, dry chemicals and automatic systems.	125	227
RECORD INDUSTRIAL CO. **3301 Arch St., Philadelphia 4, Pa.** Representatives: Nelson H. Keeler, Bert Lipschutz Robert M. Roth Manufacturers—Complete industrial safety shoe line from economy to custom grades.	318	83
RIEGEL TEXTILE CORP. **Conover, N. C.** Representatives: J. L. Chambliss, John Levis, Joel Pattegrew, W. A. Turner, H. C. Tyo, W. T. Webster, Jr. Manufacturers—New spectacular Might Scot glove line. New knit wrist terry cloth gloves, welders gloves and hot mill gloves.	191	110

—To page 70



Model 372-9A U. S. Pat. No. 2899683

A Straightaway® Ear Protector stops this waste and drain on your money

Worker fatigue can rob you of many thousands of dollars a year, every year, without your realizing it. As injurious noise levels continue, working efficiency drops. Employees thus exposed suffer mental depression, and then hearing impairment, without at first recognizing the loss. But legal claims for auditory injuries keep increasing and so do state compensation law allowances now as high as $33,000 per claim.

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NATIONAL SAFETY CONGRESS & EXPOSITION 48
OCT. 17TH thru 21ST 1960

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Gentlemen: Please ship (1) one Straightaway Ear Protector as checked, for trial testing. If O.K. will include with first order.

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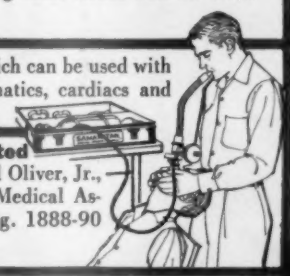
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It's an oxygen resuscitator—To restore breathing to a *non-breathing* victim. (As shown above.) Oxygen is of great value in resuscitating persons overcome from inhaling chemical asphyxiants such as: Carbon monoxide • Hydrogen cyanide • Hydrogen sulphide • Acetonitrile • Aniline • Nitrobenzene • Nitrogen dioxide • Many others which prevent adequate oxygen/carbon dioxide exchange—A single standard "D" cylinder will supply the non-breathing adult victim with 94–98% oxygen for 30 to 40 minutes.

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It has been medically evaluated
Reference: Tomashefski, J. R. and Oliver, Jr., T. K.: Journal of the American Medical Association, Vol. 172, No. 17, Pg. 1888-90 (Apr. 23, 1960).

It has an aspirator—to quickly remove vomitus, mucous, blood from the victim's mouth and upper throat . . . its use prevents victim from drowning in his own vomitus.



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He will help YOU with your resuscitation training program!



DIRECTORY OF EXHIBITORS

	BOOTH NUMBER	PAGE NUMBER
ROCKWOOD SPRINKLER CO. Div. of the Gamewell Co. Subsidiary of E. W. Bliss Co. **38 Harlow St., Worcester 5, Mass.** Representatives: E. P. Hughes, James O'Regan, B. P. Perrin, James J. Ryan Manufacturers—New Rockwood pocketAIRE breathing unit. Foam, fogFOAM, waterFOG nozzles, firefighting products.	112-113	41
ROSE MFG. CO. **2700 W. Barberry Place, Denver 10, Colo.** Representatives: Allen Kline, Clarence W. Rose, Mrs. Clarence W. Rose, J. E. Sharp Manufacturers—Auto safety blets, ladder shoes and safety devices, safety belts for men subject to falls, lanyard or life lines shock absorbers for men working in high places, tool holders, window cleaners' belts and equipment, rope ladders.	30-31	234
SAFEGUARD MFG. CO. **Pomperaug Ave., Woodbury, Conn.** Representatives: Betty Plumb, Edwin W. Plumb Manufacturers—Modern press guards.	172	—
SAFETY BOX TOE CO. **812 Statler Bldg., Boston, Mass.** Representatives: Wirt G. Greenan Manufacturers—Winguards and other type steel toes.	9	I.F.C.
SAFETY CLOTHING & EQUIPMENT CO. **1990 E. 69th St., Cleveland 3, Ohio** Representatives: Al Carr, Lee Debes, Edward Harris, Art Henke, Earl H. Brooks, Lillian Brooks Manufacturers—Safety clothing and equipment for every type of industrial worker.	55-56	242
SAFETY FIRST PRODUCTS CORP. **175 Saw Mill River Road, Elmsford, N.Y.** Representatives: Roger R. Cholin, Jare B. Fleming, Joe L. Risinger Manufacturers—Fire extinguishers.	232	100
SAFETY FIRST SHOE CO., INC. A. GENESCO INC. DIV. **Water St., Holliston, Mass.** Representatives: James R. Davis, Louis Rubin, Keith D. Snyder Manufacturers—Safety steel toe shoes for men.	18	79
SAFETY TOWER LADDER CO. **1024 Burbank Blvd., Burbank, Calif.** Representatives: F. R. Herod, Bernard O. Stjernquist, Joan Van Voorhees Manufacturers & Distributors—Safety equipment for fixed ladders and scaffolds.	193	105
SAF-T-BOOM SALES & SERVICE, INC. **1613 Main St., Little Rock, Ark.** Representative: John H. Finne, Art Thomas Manufacturers—Saf-T-Boom, a crane boom guard to prevent electrical contact.	310	234

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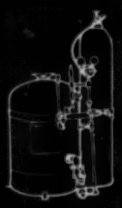






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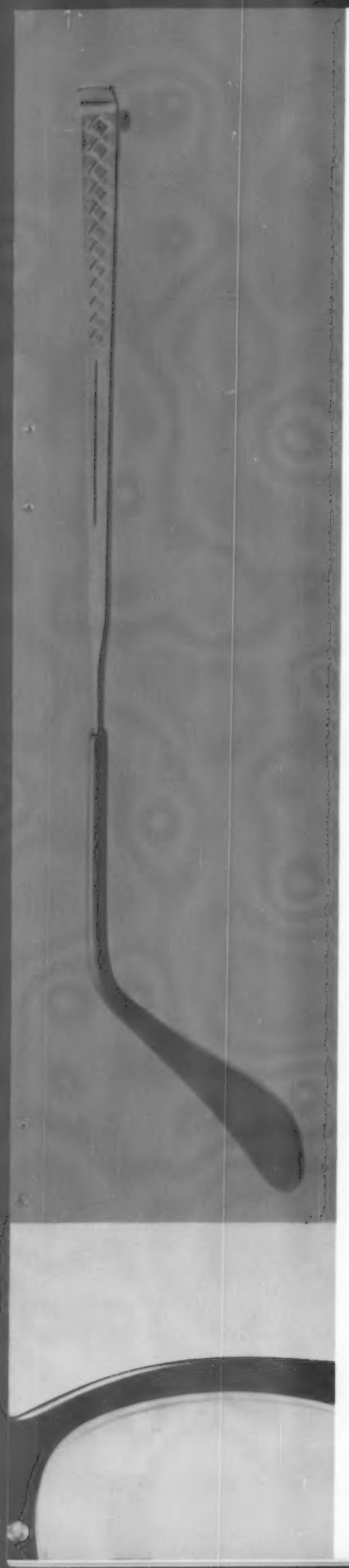
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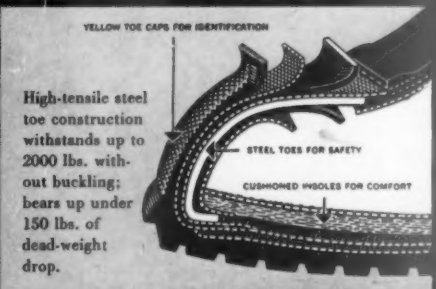
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SALISBURY, W. H. & CO. **401 N. Morgan St., Chicago 22, Ill.** Representatives: M. J. Allison, R. J. Arens, T. R. Claffy, Geo. F. Salisbury, Wm. F. Salisbury Manufacturers & Distributors—Linemen's Rubber Protective devices.	90-91	96
SAROLE, INC. **228 N. Wood Ave., Linden, N. J.** Representatives: Dr. L. Kriuit, Joanna O'Malley, Dr. Ralph G. Rohner, David Sacks Manufacturers—Non-traumatic carrier	167	—
SAWYER-TOWER, INC. **76 Stanley Ave., Watertown 72, Mass.** Representatives: L. Glenn Harp, Leonard Hatch, Horace B. Hills, J. Nelson Manning, Jack O'Brien, William A. Reilly, David Turnock Manufacturers—Protective clothing, aprons & allied items.	170	94

Answers From NSC Staff



SCHRADER'S, A. SON **470 Vanderbilt Ave., Brooklyn 38, N. Y.** Representatives: D. C. Baker, Garvin A. Drew, Harold P. Hecken, S. LeCount Manufacturers—All types of actuating valves and air line accessories; cylinders, air control products.	12-13	—
SCOTT AVIATION CORP. **207 Erie St., Lancaster, N. Y.** Representatives: R. P. Banks, H. A. Benzel, J. D. Bone, Robert J. Brewer, W. J. Carberry, C. D. Cupp, W. G. Eckman, J. H. Flannery, L. E. Jordan, A. E. Miller, R. D. Pollock, K. J. Sagehorn, Earle M. Scott Manufacturers—Scott Air-pak demand inhalator, demand respirator, hydro-pak.	121-122	45
SEARJEANT METAL PRODUCTS, INC. **P. O. Box 74, Mendon, N. Y.** Representatives: I. L. Searjeant, R. L. Searjeant, W. H. Searjeant Manufacturers—Guards and controls for protection of punch press and press brake operators.	301	238
SELLSTROM MFG. CO. **Highway 53 at U. S. 14, Palatine, Ill.** Representatives: Vernon Clauson, Lester Gooch, Robert Hamen, Fred Schaefer, Roger Sellstrom Manufacturers—Head and eye protective equipment.	132-133	92
SPEAKMAN COMPANY **P. O. Box 191, Wilmington 99, Del.** Representatives: Willard A. S. Denham, Gary Fonken, C. C. Gerow, Jr., S. C. Lasley, S. W. Lasley, W. A. Skoglund, W. A. Speakman, Jr., Thomas Stoddard, John J. Traynor, D. W. Westergreen Manufacturers—LIFESAVER emergency and decontamination showers and EYESAVER Aerated eye wash fixtures.	168	156
STANDARD SAFETY EQUIPMENT CO. **431 N. Quentins Road, Palatine, Ill.** Representatives: Robert Christensen, Robert J. Dee, John N. deRoulet, George G. Dickson, L. E. Dickson, Earl J. Hoagland, Robert Kent, Charles Lindell, Henry Martensen, Harry Miller, Maynard Page, Lane Prior, James E. Scarborough, Arthur O. Schmidt, Frank Scroggins, Donald Shrewsbury Manufacturers & Distributors—Industrial safety equipment.	34-35	190
STEPHENSON CORP. **P. O. Box 392, Red Bank, N. J.** Representatives: Timothy J. O'Shea, Jack Renaldi, William H. Stephenson Manufacturers—"Minuteman" resuscitator for breathing failure and the "Borkenstein Breathalyer" to measure alcohol in the blood.	29	—
STEPHEN-WILLIAM CO **600 S. Michigan Ave., Chicago 5, Ill.** Representatives: Jack Halperin, David Lamoureaux, Louis Rotberg Manufacturers—Most effective and newest technique of employee communication and motivation.	304	—
STONEHOUSE SIGNS, INC. **842 Larimer St., Denver 4, Colo.** Representative: James S. Adkins, Gordon Stone, Lee Stone Manufacturers—Industrial accident prevention signs.	129	181
STOP-FIRE, INC. **U. S. Highway #1 at Black Horse Lane** **New Brunswick, N. J.** Representatives: Edward S. Nurkiewicz, Paul D. Nurkiewicz, Paul J. Nurkiewicz Manufacturers—Fire extinguishers.	70	—
SURETY RUBBER CO., THE **N. High St., Carrollton, Ohio** Representatives: David S. Clark, Carl Gotschall, S. S. Hall, H. A. Macintosh Manufacturers—Personal protective equipment for industrial and electrical workers.	67	224
SURTY MFG. CO., INC., THE **4139 W. Kinzie St., Chicago 24, Ill.** Representatives: H. W. Beegle, F. M. Fowler, Robert J. Gill Manufacturers—Point of operation safety guards, magnifiers, dust collectors.	131	—
SWITZER BROTHERS, INC. **4732 St. Clair Ave., Cleveland 3, Ohio** Representatives: R. Dykstra, Arnold Lozzi, Barney Meade, Ron Perrin, Gerry Peter, Ray Phares, Bob Rosene, Gordon D. Russell Manufacturers—"Day-Glo" daylight fluorescent safety paint for high-visibility marking of hazards.	214	—
SWIVELIER CO., INC. **30 Irving Place, New York 3, N. Y.** Representatives: H. C. Brandman, Irving Kuchar, J. V. Marcus, Samuel Rosaler, Irving Schucker Manufacturers—Swivelier Universally adjustable "Dextra-Lite" for commercial and industrial lighting application.	208	—

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TECT, INC. **254 Livingston St., Northvale, N. J.** Representatives: Robert M. Elrich, Jay Patrick Manufacturers—Vythene safety solvent and new tecleno solvent-detergent	175	40
TITMUS OPTICAL CO., INC. **Petersburg, Va.** Representatives: H. P. Collier, Jr., William T. Cameron, R. A. Sherman, George H. Thomsen, Thomas A. Wilson Manufacturers—T/O-7 Protective and T/O vision tester with night driving tests.	194A	—
U-C-LITE MFG. CO. **1050 W. Hubbard St., Chicago 22, Ill.** Representatives: Bob Cagen, Al Davis, Ray Green, Bob Schrank, Aaron Tilkin, Ted Weinstein Manufacturers—Emergency lighting equipment, barricade lights, portable electric hand lamps.	217	245
UNION WIRE ROPE CORP. **SUBSIDIARY OF ARMCO STEEL CORP.** **21st & Manchester, Kansas City 26, Mo.** Representatives: E. R. "Ed" Blanchard, R. B. "Bob" Boand, R. L. "Dick" Creamer, M. K. "Mel" Hass, Wade A. Merrifield, Ray G. Noble Manufacturers—"Tuffy" slings and "Tuffy" hoist line. Overhead crane display.	11	175
UNITED STATES RUBBER CO. **1230 Avenue of the Americas, New York 20, N. Y.** Rpresentatives: W. E. Fitzharris, Wayne Hagedorn, John A. Kuhn, N. J. LeCompte, E. J. Milota Manufacturers—Industrial safety clothing and safety foowear.	173	76
UNITED STATES SAFETY SERVICE CO. **1535 Walnut St., Kansas City 8, Mo.** Representatives: G. R. Adair, T. L. Beveridge, W. W. Duncan, J. H. Ensminger, N. G. Friesenborg, J. D. Holdsworth, W. R. Jones, E. E. McDaniel, A. F. Parmelee, R. J. Russell, R. M. Shirvanian, D. P. Spoerer Manufacturers—Modern industrial eyewear sold direct to the user.	100-101-102	147
WAGNER SIGN SERVICE, INC. **218 S. Hoyne Ave., Chicago 12, Ill.** Representatives: A. B. Balch, P. L. Bierce, W. F. Jacobsen, C. J. Meyer, W. Schubert, R. Wohlberg Manufacturers—Changeable copy displays.	234	202

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WATCHEMOKET OPTICAL CO., INC. **232 W. Exchange St., Providence 3, R. I.** Representatives: Harold T. Connors, Mrs. Marie Cook, Mrs. Ernest A. Ring, Ernest A. Ring Manufacturers—"Eye-Savers" plastic eye promotion and Plasi-Glow Safety signs.	140-141	28-29
WELSH MFG. CO. **9 Magnolia St, Providence 9, R. I.** Representatives: William D. Gross, Thomas Johnson, B. C. Josselyn, E. N. Luckey, J. Kenton Speel, F. A. Stevens, R. H. Wheelock Manufacturers—Safety goggles, lens, face shields and helmets.	123-124	—
WHEELER PROTECTIVE APPAREL, INC. **224 W. Huron St., Chicago 10, Ill.** Representatives: Helmut R. Jenke, Jean Lucas, Florian J. Nicpon, Edward Piotrowski, Hudson L. Wheeler, Gladys A. Whittingham Manufacturers—Industrial safety clothing for heat and abrasive hazards.	77	34
WILLIAMS JEWELRY & MFG. CO. **10 S. Wabash Ave., Chicago 3, Ill.** Representatives: R. W. Duda, C. B. Williams, D. J. Williams, Marie Williams Manufacturers—Safety plaques, safety emblems, safety trophies and other award incentives.	48	212
WILLSON PRODUCTS DIV., RAY-O-VAC CO. **2nd & Washington Sts.** **Madison 10, Wis.** Representatives: A. Anderson, Charles Bell, P. D. Brown, Robert Fitterling, Vern Gongoll, Ray E. Green, Robert L. Haack, Stanley C. Herbine, William S. Hipp, A. R. Karstaedt, Lloyd E. Lund, E. Cecil Martin, Steve P. McGarvey, Robert S. Moore, John Reese, Charles L. Royer, Michael F. Shields, James G. Simmons, Owen R. Slauson, William C. Weeks, William G. Wood Manufacturers—Industrial goggles, gas masks, helmets and respirators, and allied safety devices.	107-108-109	14-15
WILSON RUBBER CO., THE DIV. OF BECTON, DICKINSON & CO. **1200 Garfield Ave., S. W., Canton 6, Ohio** Representatives: R. Burrell, C. Dubbs, K. Masters, R. L. Moody, T. L. Peterson, John Simmons, G. S. Wilson Manufacturers—"Will-Guard" rubber and synthetic industrial gloves for every use.	23	27
ZENITH RADIO CORP. HEARING AID DIV. **6501 W. Grand Ave., Chicago 35, Ill.** Representatives: Frederick J. Artz, F. J. Blanchard, T. G. Czarnick, S. L. Eaton, Eugene M. Kinney, Al Smith, Ralph L. Wagner Manufacturers—Diagnostic audiometers that also can be used for individual and group screening.	307	—

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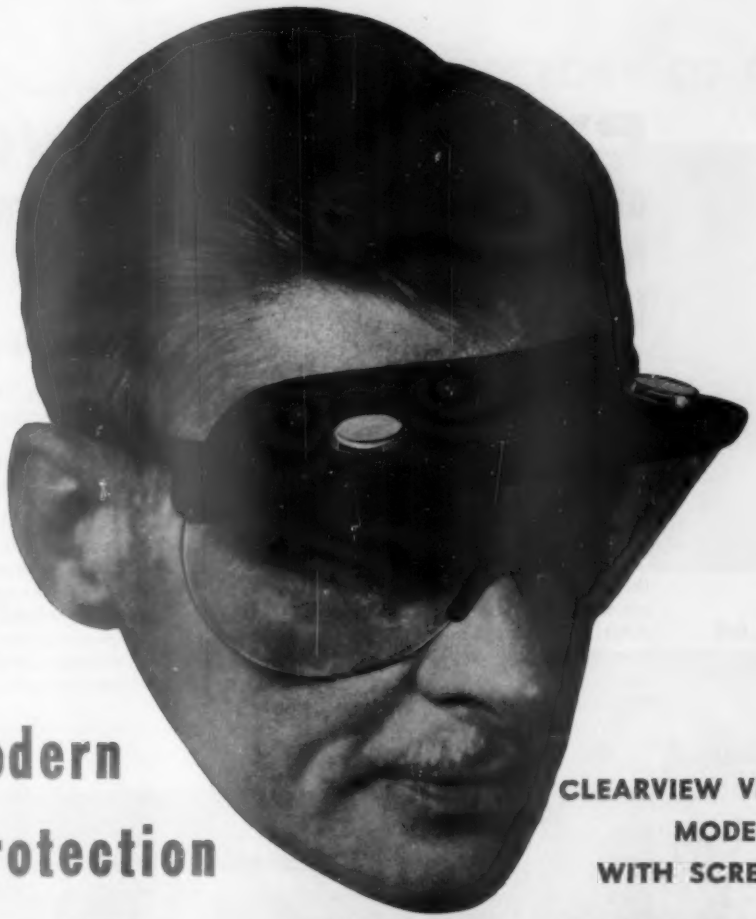
Each year the Program Committee of the National Safety Council's Industrial Conference makes available Exposition space to several organizations who have exhibits of interest to the safety engineering fraternity.

This year's exhibits are listed in the column on the right.



Dr. William P. Yant, NSC's Vice-President for Research and Education, confers with Paul Scher, representing the President's Committee on Employment of the Physically Handicapped.

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INTER-AMERICAN SAFETY COUNCIL, INC. **2 Rector St., New York 6, N. Y.** Representatives: F. E. Fernandez, W. T. Rogers "The Safety Council serving Latin America"	158B	—
NATIONAL SAFE BOATING ASSOC. **611 E. Marceau St., St. Louis 11, Mo.** Representatives: Robert V. Hadley, Donald L. Steele Promotes boating safety by recreational and commercial users of the Nation's waterways.	158F	—
NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS **1790 Broadway, New York 19, N. Y.** Representatives: James E. O'Neil, Regina Wronieski Wise Owl Club.	158C	—
PRESIDENT'S COMMITTEE ON EMPLOYMENT OF THE PHYSICALLY HANDICAPPED, THE **Room 7133, U. S. Dept. of Labor, Washington 25, D. C.** Representatives: Harry Bendtsen, James Brignall, Dwight Guilfoil, Jr. Booth will be staffed by representatives of the Paraplegics Mfg. Co.	158D	—
U. S. FOREST SERVICE **4232 S. Agriculture Bldg., Washington 25, D. C.** Representatives: Ed Blaser, Paula Bunyan, Jack Heintzelman, Seth Jackson, William (Bud) Moore Smokey Bear—Forest Fire Prevention, and Forest Service Safety Materials.	158A	—
U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE **Public Health Service, Div. of Special Health Services, Accident Prevention Program, Washington 25, D.C.** Representatives: Dr. Paul V. Joliet, Eugene L. Lehr, A. F. Schaplowski, Dr. Alexander Monto, A. P. Iskrant Accident Prevention Program of the Public Health Service.	158E	—



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- NO FOGGING—no pitting
- NO GLARE, distortion or reflection
- NEAT — smart — modern appearance
- SAFELY NON-FLAMMABLE
- LIGHT WEIGHT—cool comfortable
- ECONOMICAL to use
- ULTRA VIOLET ABSORBING LENSES

SEND FOR ILLUSTRATED CATALOGUE FOR MODELS LISTED BELOW:

ASSURED WORKER ACCEPTABILITY

CLEARVIEW	#1	Clear Lens
GLARESTOPPER	#1A	Light Pale Green
GLARESTOPPER	#2	Pale Green
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GLARESTOPPER	#3	Dark-Sage Green

Choice of 18 hole or Screened Port ventilation

ONE-PIECE SHATTERPROOF PLASTIC LENS
(METHYL-METHACRYLATE)

ELIMINATE EYESTRAIN AND REDUCE FATIGUE

CALL YOUR JOBBER OR WRITE TO:

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VISIT US AT BOOTH NO. 57—NATIONAL SAFETY CONGRESS & EXPOSITION

PYRENE-C-O-TWO

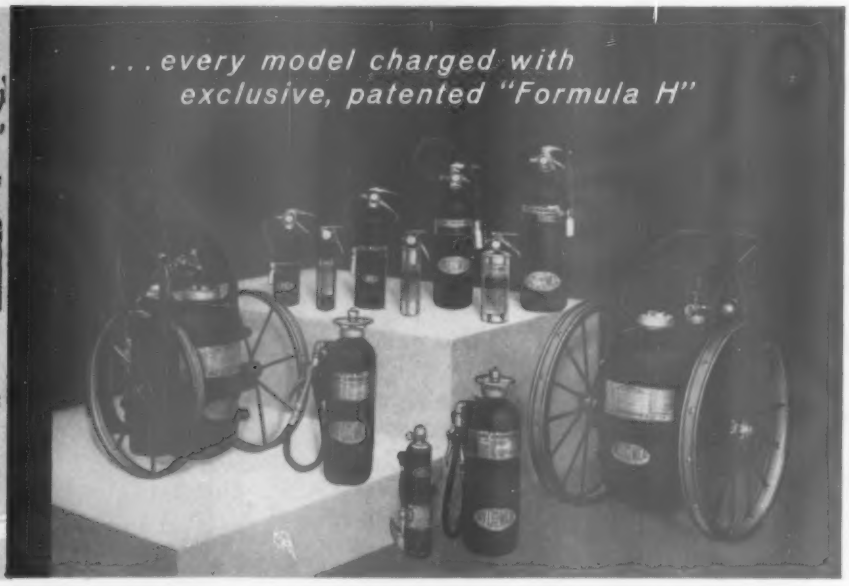
offers 10 Dry Chemical Extinguishers for complete Class B and C fire protection

Your local Pyrene-C-O-Two distributor now offers 10 dry chemical extinguisher models, 2½ to 150 lbs., to give your plant complete protection against all flammable liquid, gas and electrical fires. Every dry chemical unit is charged with patented "Formula H," an exclusive, moisture-repellent, heat-resistant, non-caking powder that flows freely under all conditions. Every model is approved by Underwriters' Laboratories and Factory Mutual.

If you prefer stored pressure types, you can select from 2½, 5, 10, 20 and 30 lb. models. These units expel powder in a thick, blanket-like stream when the lever of the squeeze-grip nozzle is pressed . . . visual gauge shows operating condition. Or you can choose from 4, 20 and 30 lb. cartridge-operated models. After these extinguishers are inverted and the cartridge-piercing mechanism bumped, the dry chemical stream can be controlled by the squeeze-type discharge nozzle. Completing the line are 75 and 150 lb. wheeled portables which can easily be maneuvered indoors or out.

You'll see many of our 1,200 PRODUCTS BOOTHS 146-149 National Safety Conference





Your Pyrene-C-O-Two distributor will help you make your dry chemical extinguisher selections . . . or he can also show you a complete line of liquid agent or carbon dioxide extinguishers. Look for his local listing in your Yellow Pages under "Fire Protection Equipment."

Pyrene C-O-TWO

products of THE FYR-FYTER COMPANY, Dayton 1, Ohio

Branches: Atlanta, Baltimore, Boston, Chicago, Dallas, Dayton, Detroit, Los Angeles, New York, Newark, Philadelphia, Pittsburgh, Portland, Rochester, San Francisco, Toronto (Ontario). Representatives and Distributors in all principal cities.

DIRECTORY OF PRODUCTS

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Safety Men . . .



Ask Questions . . .



About New Safety Products

Can you pick the safety shoe most used in these fields?

☐ construction ☐ big steel ☐ auto

☐ oil refining ☐ chemical & dye ☐ light industries



1. This six-inch black leather work blucher is Quilon®-tanned and Dacron®-stitched for acid and chemical resistance. Most used? *Chemical and dye works*, natch! But non-slip Neoprene sole and heel, rivet-reinforcing and leather-lined steel toe box make it popular in lots of other fields, too. Sizes C 6-11, D-E 6-12, EE 6-14, S-4115 (Brown), S-1014 (Black).

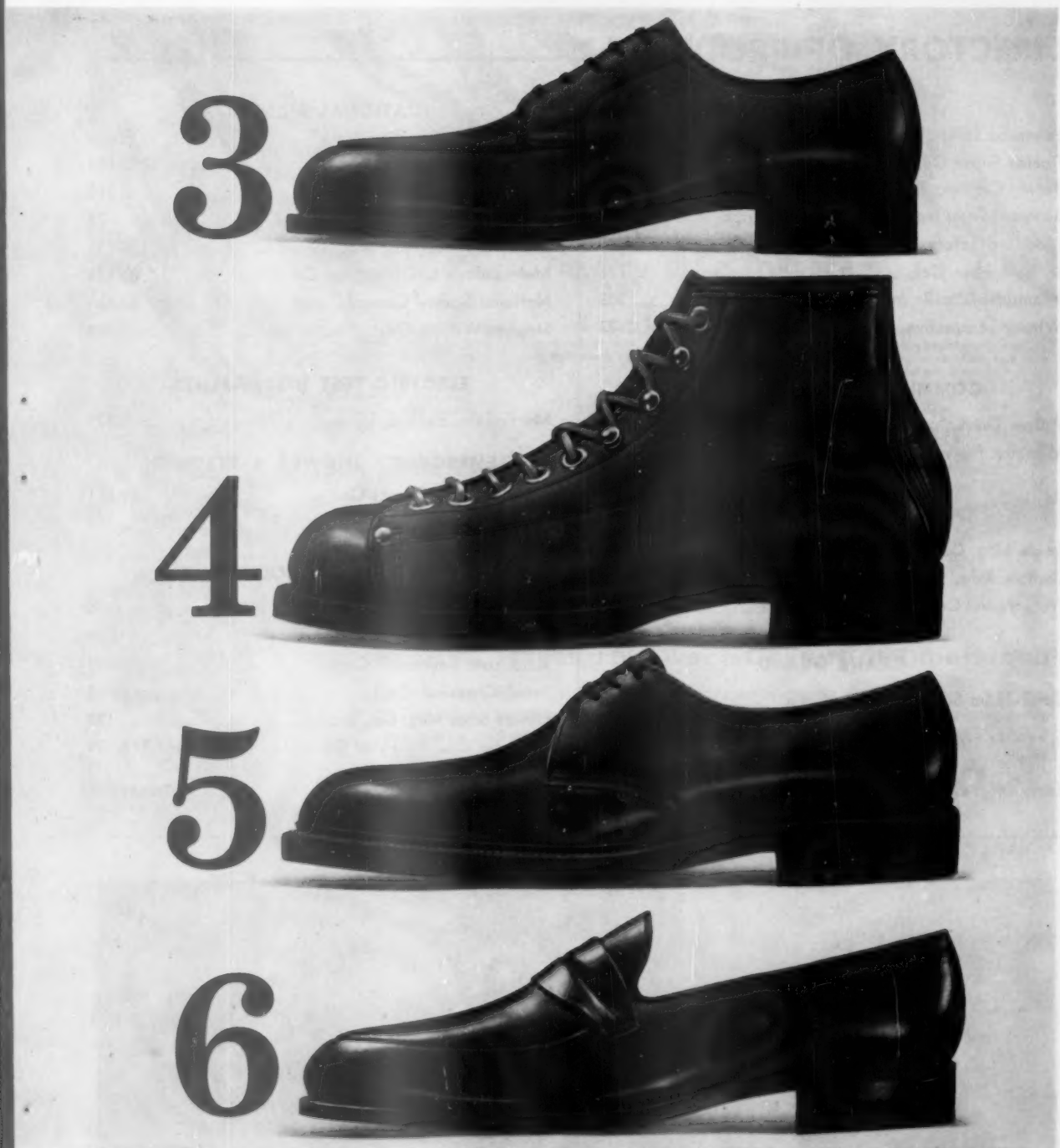
2. The Highguard, S-4117—a shoe that's as tough as it looks. Plastic plate guards instep. Snap-top tongue keeps out metal shavings, dirt, gravel. Neoprene cord sole resists acids and chemicals. Useful in any tough job—a favorite in *big steel*. Sizes D 6-12, EE 6-12, Brown.

3. This moccasin-oxford doubles handsomely as a dress shoe, too. But its soft glove-leather lining and famously comfortable Thom McAn cushion insole do a terrific job of cutting on-the-job fatigue for men who stand on their feet all day. That's why it's such a natural for all assembly line and small lathe operations. A favorite in aircraft and *auto*. Tough butyl-leather outsole made to military specifications. Sizes B 8-12, C 7-12, D-E-EE 6-12, S-4374 (Brown), S-1374 (Black).

4. Thom McAn, S-4131, the Rigger. The man who wears it is six inches deep in thick, soft glove leather—as comfortable as it is protective. Laced to the toe with tough rawhide lace, rivet-reinforced, soled and heeled with non-slip Neoprene cord and equipped with a leather-lined steel toe box, this amber blucher goes great wherever the going is really tough—e.g., *construction*. Sizes C 7-12, D 6-13, E-EE 6-12.

5. At first glance this is a handsome dress shoe. Since it's also dress-weight, it doubles for one. But the storm welt

See the whole line at The National Safety Show, Booth 118, Hilton Hotel, Chicago,



really keeps out moisture. Nitro-crepe sole and heel prevent slippage—even on grease-slick floors. So it's a favorite wherever floors are wet and slippery—e.g., *oil refineries*. Leather-lined steel toe box. Sizes A 8-11, B 8-12, C 7-12, D-E-EE 6-12, S-4384 (Brown), S-1384 (Black).

6. The Lancer, a go-everywhere slip-on that leads an active social life. During and after hours it's a favorite with supervisors, foremen and production workers in all *light industries* for its continental styling, light-weight comfort and protective leather-lined steel toe. B & B, brown brushed with black (S-4309), or straight black (S-1309). Leather sole. Sizes B 8-12, C 7-12, D 6-12, E 6-12.

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Thom McAn

A DIVISION OF MELVILLE SHOE CORPORATION

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Gentlemen: Please send me the following at once:
(Check service required)

- ☐ Details of Thom McAn's Sales Plans
- ☐ Illustrated list of Thom McAn Safety Shoes
- ☐ Set of safety posters

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Position_____

Firm_____

Address_____

City_____ Zone____ State_____

N-10

DIRECTORY OF PRODUCTS

	Booth
Pulmosan Safety Equipment Corp.	63-64
Racine Glove Co., Inc.	199
Safety Clothing & Equipment Co.	55-56
Sawyer-Tower, Inc.	170
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President Eisenhower Addresses the 46th National Safety Congress



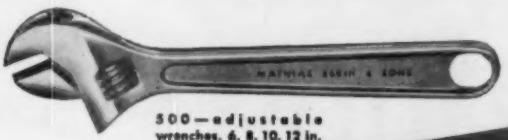
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213-9NE—high leverage plier. Will cut regular and weatherproof hard drawn copper wire up to No. 2.

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500—adjustable wrenches. 6, 8, 10, 12 in.



510—pump plier. One hand operation. Length, 9½ in.

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Safety... Backed by Over a Century of Experience

For over 100 years Klein has been producing safety equipment for linemen, electricians and workmen everywhere.

The name Klein stands first among utility companies today as it has constantly during the last century.

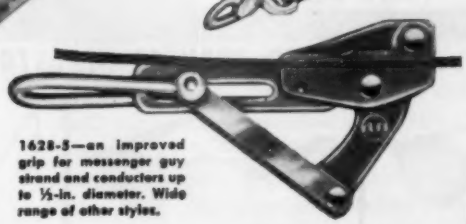
Because an imitation can never be as good as the original, make sure that all the pliers and equipment you buy carry the familiar Klein trade-mark.



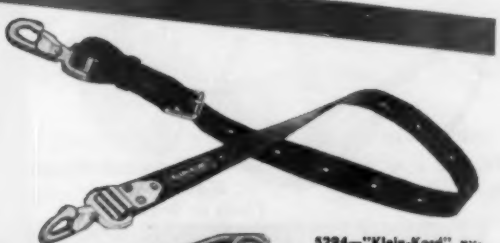
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720S—SELL-FIT with Side Shields, in Flesh or Green Frames

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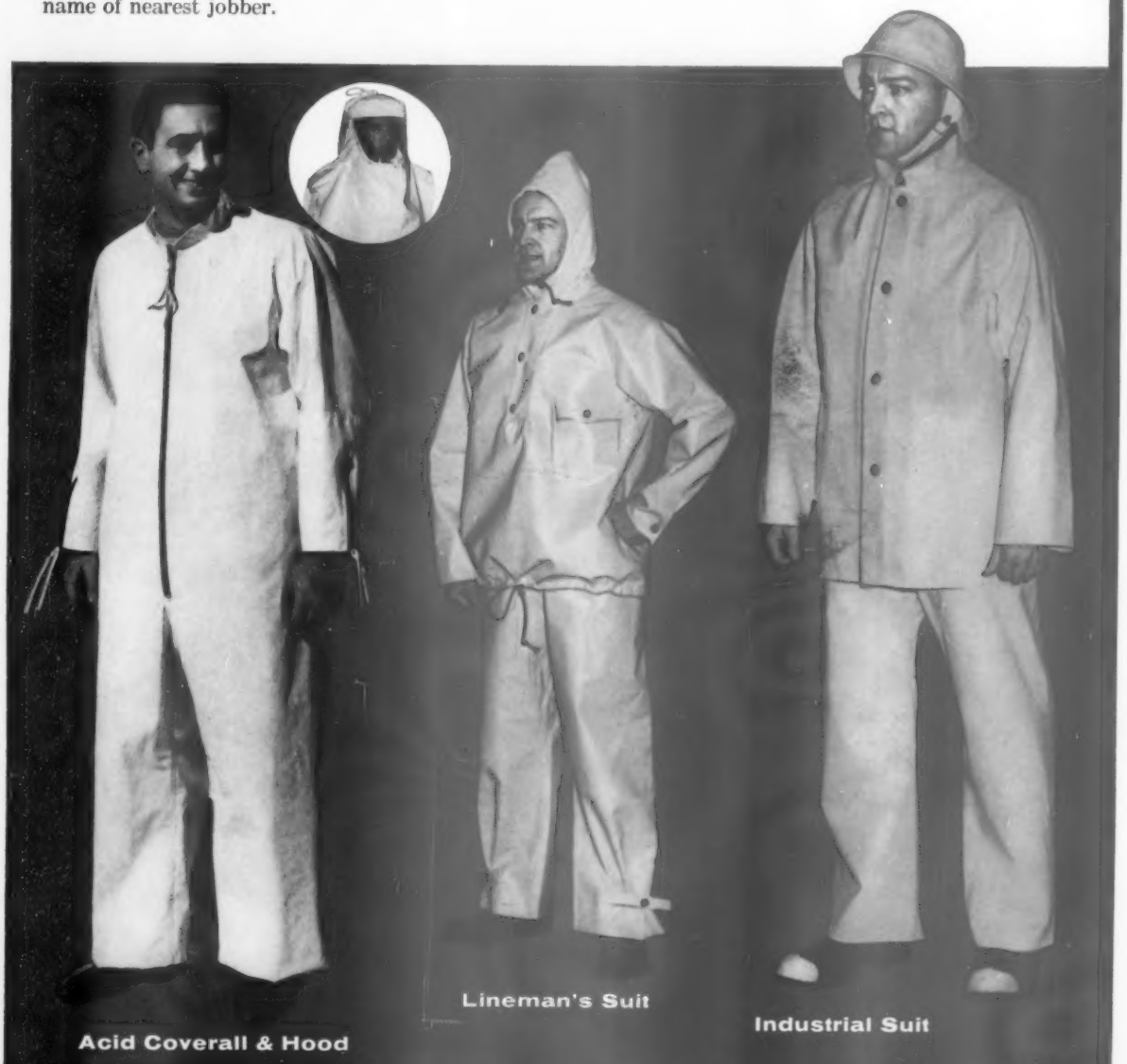
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Kidde, Walter & Co., Inc.	96-97
Randolph Laboratories, Inc.	125
Safety First Products Corp.	232
Stop-Fire, Inc.	70

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Standard Safety Equipment Co.	34-35
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FIRST AID & MEDICAL SUPPLIES

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Bullard, E. D. Co.	126-127-128
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Halperin, A. E. Co., Inc.	213
Junkin Safety Appliance Co., Inc.	89
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Medical Supply Co.	136-137-138
Mine Safety Appliances Co.	83-84-85-86

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Progress Industries, Inc.	233
Pulmosan Safety Equipment Corp.	63-64

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For Time-Saving Hot Stick Application on

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- **Underslung or Vertical Disconnect Switches**
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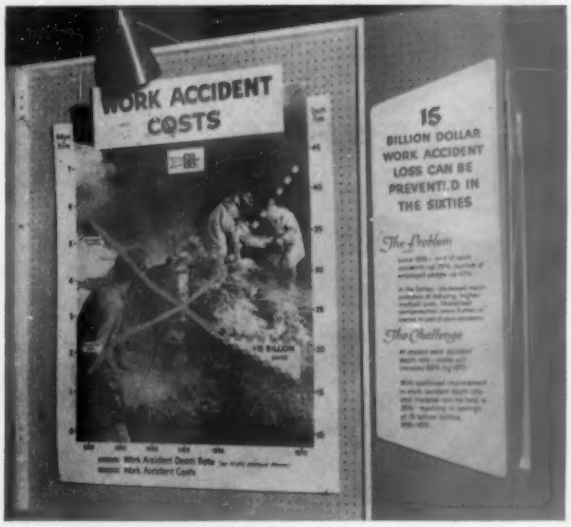
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Granet Corp., The	306
Industrial Gloves Co.	16-17
Jomac, Inc.	2
Kunz, J. Glove Co.	156
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Davis Emergency Equipment Co., Inc.	75-76
Fendall Co.	44-45
Fibre-Metal Products Co.	179-180
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Mine Safety Appliances Co.	83-84-85-86
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ALUMINUM or STEEL

Take the finest hand hoist ever made for simplicity of design and sturdiness of construction...add to it new external and internal parts of aluminum...and you have the WRIGHT Aluminum Safeway Hand Hoist. This hoist is made lighter and more easily portable, yet retains all the advantages of the original Safeway design. It features load-bearing parts of strong, shock-resistant steel. Aluminum replaces the heavy steel covers, chain guide and hand chain.

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Or write our York, Pa., office for DH-164 and DH-345 which give complete information about WRIGHT Safeway Hand Hoists made from aluminum and steel. Find out the advantages they offer you.

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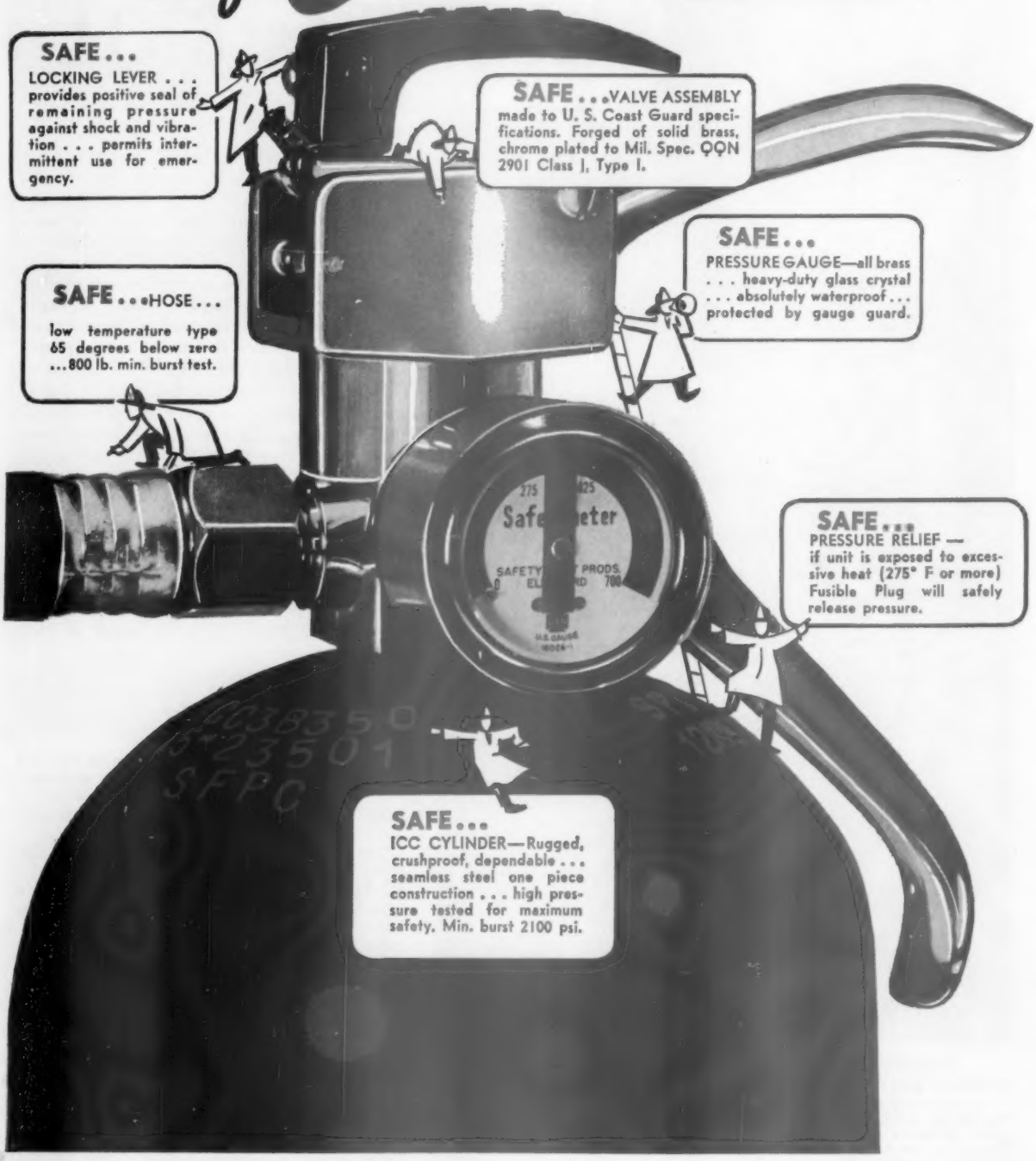
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Visitors from Japan . . .



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Which is **your** hook?

THIS.....OR THIS

STANDARD HOOK



This standard hook, through overloading, has spread over an inch from its original dimension. Be safe with Newco Safety Hooks. INSIST ON NEWCO.

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Fool proof; positive locking Newco Safety Hook eliminates error. Gate or yoke locks automatically when load is lifted. Hook must be manually pressed against a compression spring to open. Smooth design keeps hook from catching on projections. Drop forged hooks, 110,000 P.S.I. Manganese Bronze Yokes.

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automatic ladder safety device



- Positively Prevents Death and Injuries from Falling
- Permits Free Movement—Up or Down—in Absolute Safety
- Simple to Use—Requires No Attention from Climber
- Inexpensive—Easy to Install—No Maintenance
- Job-Proven Under All Conditions for 13 Years

Your men will be as safe in the air as on the ground with NOTCH-LOK—the revolutionary tower ladder safety device that positively prevents death and injuries from falling. NOTCH-LOK never has to be unhooked—workmen are safe all the time. If he slips or falls, device locks within 6 inches . . . stays locked until he has recovered his footing or been lifted to safety. It will not slip down the ladder, even if workman is unconscious! Thoroughly job-proven under all climatic conditions . . . approved by safety engineers and construction experts the world over.

Write for illustrated Bulletin and safety test report.

SEE THIS OUTSTANDING SAFETY EQUIPMENT *BOOTH 193* *SAFETY CONGRESS*

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SEECLOTH

VISIT US AT BOOTH NO. 197

THE SIGHTSAVING METHOD OF CHOICE CLEANS AND FOGPROOFS GOGGLES

WHAT SEECLOTH IS:

SEECLOTH is a chemically treated fabric which when rubbed on glass both cleans and prevents fogging or misting. It has found use in industry as a convenient method for cleaning and preventing the fogging of goggles of workers who must protect their eyes in various industrial operations.

ECONOMICAL:

It is the most convenient and economical method known for this purpose. One piece (8" x 9") will last for a number of months when used on goggles or glasses.

INCREASES WORKER SAFETY:

The fact that the worker has the means for preventing misting of his goggles right on the job increases the safety of the operation since it reduces the temptation to continue to work with misted glasses. He can fogproof them without leaving his work.

HOW TO USE SEECLOTH:

All that is necessary is to wipe the very slightly moistened glasses with the dry **SEECLOTH** and thus fogproof the glasses for a considerable period.



SEECLOTH has also found use in preventing misting of the inside of windshields in foggy or damp weather. Here also all that is necessary is to rub the very slightly moistened glass surface with the dry **SEECLOTH.** Mist will then not form on the area that is rubbed. Other applications include its use on spectacles, mirrors, windows, etc.

HOW SEECLOTH IS PACKAGED:

3" x 8" pieces (not individually packaged). Suitable for eyeglasses. 8" x 9" pieces (packaged in 3½" x 6" polyethylene envelopes). Suitable for goggles and masks and fits easily in the pocket of coveralls. 12" x 18" and 16" x 18" pieces (packaged in 5" x 10" polyethylene envelopes). Suitable for automobile windshields, household use, etc.

In addition to the standard sizes, **SEECLOTH** will be cut to special sizes on order and is also available by the yard—36" wide.

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SLING CHAINS THAT TALK



The WARNING RING on Campbell SENTRY SLINGS* tells you immediately when the sling has been overloaded . . . it elongates visibly . . . and before the chain itself is damaged.

Your eye can see the difference!

Ring remains round
Sling used properly

Ring distorted
Sling overloaded

New, revolutionary . . . Campbell **SENTRY SLINGS**—fully tested for over a year by foundries, steel fabricators and heavy equipment manufacturers, offer many important advantages. The **WARNING RING** is stronger than the chain itself. Yet it changes shape as the sling is overloaded . . . *before permanent damage occurs.* Repair is quick and easy, with a new **WARNING RING** replaced at the factory. Re-tested and re-certified Sentry Slings are again ready for regular service.

Here's How You Benefit From New SENTRY SLINGS:

- Safety programs are easier to maintain—with the **WARNING RING'S** built-in safety that protects men and material!
- Lower repair costs give larger savings than ever—normally only the **WARNING RING** will need repair!
- Immediate visual evidence of overload means easier inspection—even while sling is in use!

SENTRY SLINGS, available in all types, are made from Cam-Alloy steel chain only and are available at no extra cost! All slings carry the Campbell Guarantee and Certificate of Test.

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with the WARNING RING
SENTRY SLING

CAMPBELL CHAIN *Company*

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*Patent Applied For



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MINIMIZES TOXIC FUMES! MINIMIZES FIRE HAZARDS!

Approximately 25 times safer than carbon tetrachloride, National's SS-25 is used by America's largest industries. SS-25 induces no moisture into windings of electric motors . . . leaves no residue . . . completely eliminates greases and oils. SS-25 has a dielectric constant of more than 25,000 volts . . . and *no flash at the boiling point*. SS-25 is the safe answer for cleaning electric motors, components, etc. Classified as to fire hazard only by Underwriters Laboratories.

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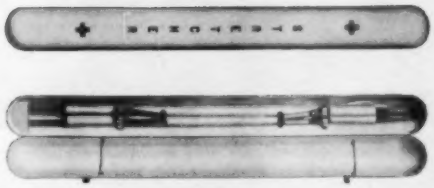
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Glendale Optical Co., Inc.	198
Insto-Gas Corp.	7
Jackson Products Div. Air Reduction Sales Co.	153-154
McKay Co., The	312
Pulmosan Safety Equipment Corp.	63-64
Welsh Mfg. Co.	123-124
Wheeler Protective Apparel, Inc.	77
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INDUSTRY PROVEN SAFETY PROTECTION by Osborn



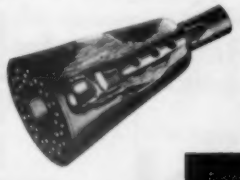
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For the lack of **OSBORN SAFETY PLIERS** fingers have been lost, hands have been severed, costly dies ruined. Made of Osmolloy, an aluminum alloy—will not flatten under impact. "Industry Proven".



In case of need . . . **OSBORN** reinforced Plastic Stretcher Case. No Maintenance—Corrosion Repellent—No Dents—Rot—Mildew—Fungus Proof.

for NOISE reduction . . . **OSBORN *Silenc-Air*** → Prevents Permanent Ear Injury! Reduces High Frequency Sound! Reinforced Plastic Fabrication! No Back Pressure!





AVOID DANGER, use . . . **OSBORN "Lock Out"** safety device on Switches, Fuse Boxes and all similar controls, when repairs are needed. SIX DIFFERENT LOCKING UNITS MEAN SAFETY.

Designed—Engineered Manufactured for Industry proven SAFETY

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OCTOBER 17-21
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FREE!

...to Glove Buyers

WORK GLOVE SELECTOR GUIDE

and Case History Fact File



A gold mine of helpful information on industrial gloves

Here it is . . . a helpful new selector manual covering basic types and styles of work gloves. A wealth of information, pilled down for quick reference, with scores of sketches to show you the basic cuts, cuff styles, and other important specification details. Gives tips on many points like grades of leather, and chemical resistance of plastic coatings. Illustrates actual jobs where changes in work glove specifications made big money savings. Canton Flannel, Jersey, Leather Palm, Terry Cloth, Neoprene, Plastic and Rubber coated, Hot Mill, and Welders Gloves are all included . . . a long-lasting reference for you. Ask for your copy today.

THIS COUPON WILL BRING YOU THE NEW WORK GLOVE GUIDE

To: Glove Division, Riegel Textile Corporation
Conover, N. C.

- ☐ Yes, please send me the new Work Glove Selector Guide and Case History Fact File
- ☐ Also send Riegel Catalog of Work Glove Styles
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27

AIM FOR BETTER CHAIN SAFETY WITH McKAY



Look to McKay Chain . . . for *easy, economical, safe* hauling, lifting, towing, bundling, or for any material handling task. McKay manufactures a complete line of chain and attachments produced from Mild, Alloy and Stainless Steel, Aluminum, Bronze, Iron and special Ferrous and Non-Ferrous materials—welded and weldless.



SEND FOR McKAY SAFETY KIT
. . . tells how to Use, Inspect, Maintain Sling Chains for Maximum Safety and Economy.

THE McKAY COMPANY
1005 Liberty Avenue Pittsburgh 22, Pa.

VISIT McKAY BOOTH NO. 312
at the National Safety Exposition, Chicago, October 17-21.

- Have Fun, Win Prizes at the McKay Safety Target, reproduced above.
- Learn About Chains and Chain Safety.



1960 NATIONAL SAFETY CONGRESS and EXPOSITION

October 17-21

Conrad Hilton Hotel

Exposition Floor Plans



NSC World Safety Center



◀ INDIA sends Industrial Safety Productivity Team of industrial executives, technicians, trade union leaders, and government officials to the Council. The group will analyze U.S. safety programs suitable for adaptation to Indian industrial conditions. This touring team also will scrutinize U.S. labor-management responsibility for safety.



◀ ITALIAN officials of Ente Nazionale Per La Prevenzione Degli Infortuni (National Accident Prevention Institute) meet Gen. G. C. Stewart and NSC President Howard Pyle at Council headquarters. The E. N. P. I. is a government agency, which is concerned with all fields of occupational safety, especially occupational diseases. It also is affiliated with other fire prevention, medical, and industrial hygiene agencies. The Institute develops standards for safety belts and protective gear, and studies alcoholism. It produces films, courses and publications, including at least five technical magazines and a series of bulletins each month.



◀ JAPANESE Trade Union Health and Safety Study Team confer with Roy Benson of NSC on the part the Council plays in the safety movement in organized labor. In the interests of bettering general working conditions and improving safe practices in Japan, this group has come to the U.S. to observe procedures used by management and labor in the health and safety fields. The team will receive classroom instruction in industrial safety and hygiene and will visit industries represented by members of the union. They also will discuss work safety conditions with union leaders and are to meet with state departments of labor.

This year's National Safety Congress and Exposition October 17-21 in Chicago is on target with "SAFETY EVERYWHERE . . . all the time!"

1960 Congress Theme Ties Safety Movement Together



900 program participants
300 safety sessions
187 commercial exhibits
249 booths

THE SAFETY MOVEMENT is at the same moment one rolling offensive and many smaller attacks. The yellow diamond with black dot—physical symbol of this "SAFETY EVERYWHERE . . . all the time!" campaign—will flash thousands of messages at thousands of Congress-goers from the 17th to 21st of this month in Chicago.

This dramatic recall device emphasizes comprehensive efforts of safety people to prevent and combat hazards wherever they may threaten —at work, at play, on the highways, in homes, schools, and on the farm.

"SAFETY EVERYWHERE . . . all the time!"—theme of the 1960 National Safety Congress and Exposition—is the logical nucleus around which 900 participants in 300 different sessions will champion the continuing promotion for safety.

National personalities and commercial exhibits will add impact to the five-day span of activities.

General Alfred M. Gruenther, former supreme allied commander in Europe and now president of the American National Red Cross, will be banquet speaker on Tuesday, October 18, at the Conrad Hilton. He will address Congress-goers on "American Responsibilities in a World of Missiles and Misunderstandings."

Secretary of Agriculture Ezra Taft Benson will speak to a joint session of adult and rural young people on "What We Expect From You" Wednesday afternoon, October 19, in the Midland Hotel.

Along technical safety lines, there will be 187 commercial exhibits, six educational displays, and six educational areas.

The annual Council meeting on Monday morning in the Conrad Hilton will follow the annual meeting of the American Society of Safety Engineers at the same location.

After scheduled business, the program will feature presentation of a 50-star flag flown over the nation's capitol. The Washington D. C. chapter will offer this gift to the Society through a color guard from the U. S. Fifth Army.

The annual Society luncheon on Tuesday will emphasize the second annual Technical Papers Awards. Col. Will L. Tubbs, president of the Veterans of Safety, is to preside. After this activity, there will be regional awards for chapter achievement.

The ASSE session schedule includes these subjects: Accident Prevention Fundamentals— Part I, "Maintaining Top Management Interest"; Part II, "Maintaining Supervisory Interest"; Part III, "Building Safety Consciousness."

Other ASSE programs are: "How Do You Measure Your Safety Program's Effectiveness?"; "Good Practice in Industrial Gas Installation and Use"; "Safety in Multi-Plant Operations"; "Maximizing Safety Effectiveness"; "What Value Safety Standards?"; "New Fire Extinguishing Agents"; "Safe Material Handling"; "Buying Safer Laboratory Equipment and Apparatus"; "The Dynamics of Safety Through Supervision"; "Is There a Best Method for Applying Artificial Respiration?"; "Incentives for Safety"; and "SAFETY EVERYWHERE . . . all the time!"

The SEATT program is co-sponsored by ASSE and the NSC Home Safety Conference. Co-chairmen will be: Earl R. Wallace, senior safety engineer, Kodak Park Works, Eastman Kodak Company, Rochester, N. Y.; and Samuel McKay, Jr., supervisor of safety, The Bell Telephone Company of Pennsylvania, Philadelphia, Pa.

"SAFETY EVERYWHERE . . . all the time!," a motion picture, will be presented by M. F. Biancardi, manager of safety services, Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

This session also includes a symposium: "Safety Off the Job." Mr. Wallace will moderate. J. Sharp Queener, manager of the Safety and Fire Protection Division, Employee Relations Department, E. I. du Pont de Nemours & Company, Inc., Wilmington, Del., will speak on "Why You Should Have an Off-the-Job Program."

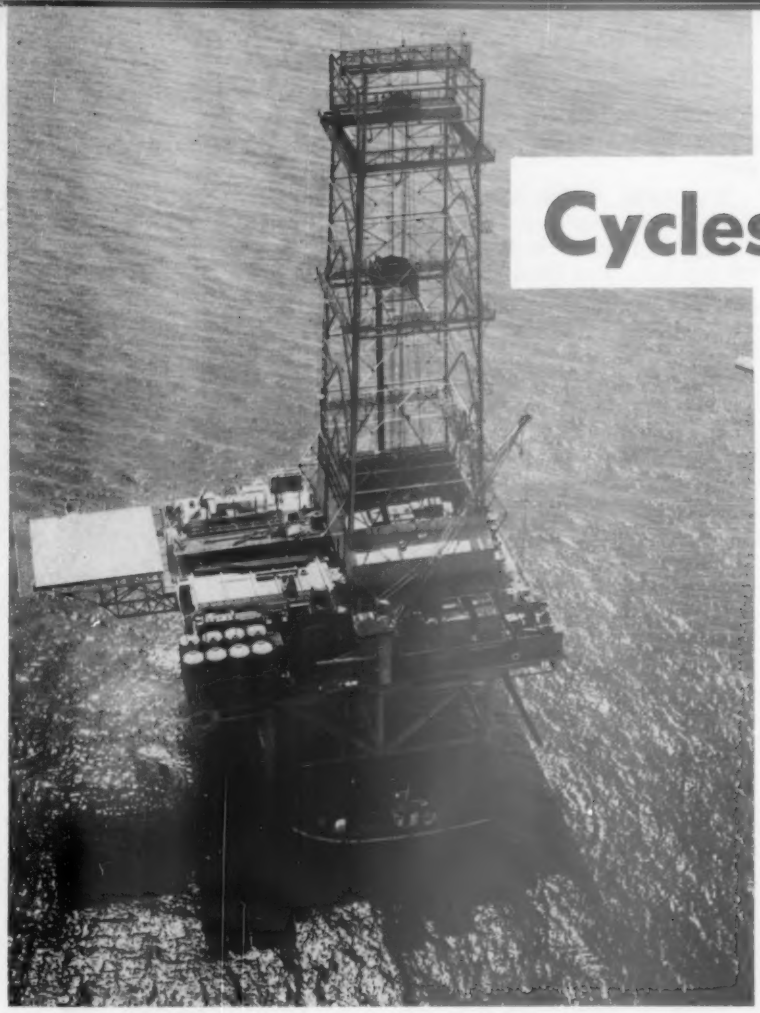
R. H. Albisser, safety manager, Merck and Company, Inc., Rahway, N. J., will discuss "How You Start an Off-the-Job Program." Philip Dykstra, manager of the NSC Home Safety Department, will comment on "Getting the Family Into the Program." Mr. McKay is to be anchor man with "Off-the-Job Safety for the Community."

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This exploratory well near Santa Barbara, Calif., produces oil at a rate of 865 barrels an hour. The platform from which the well was drilled stands in 100-ft. deep water. The 1959 cost of accidents to the company would have paid for three such wells.

Cycles, Stresses Safety

How do economic changes affect the safety picture? What can we do about them?

By H. G. VESPER

President, Standard Oil Company of California, Western Operations, Inc., San Francisco

I HAVE a strong personal interest in the success of this conference. The over-all responsibility for the safety of the employees of our company during their working hours rests on my shoulders. Also, as president of the Western Oil and Gas Association for this year, I have an over-all concern for the safety performance of the petroleum industry on the West Coast.

There is no question about the importance of our purpose. In our company we believe that safety is paramount and should never be sacrificed for economic reasons.

This statement covers a lot of ground and some may question it. To make sure the point is clear, let me quote our company's statement of policy as it appears in our published communications program:

"The company is concerned about the health and safety of its employees, both on and off the job. The company believes that this concern is paramount and that it takes precedent over either economy or expediency in the conduct of its business."

In other words, our company's *primary* incentive for accident prevention is to save lives and limbs and to eliminate needless human suffering.

But all of us should be aware that as businessmen we have a monetary incentive for safety as well.

For example, as I look at my own company's costs of accidental occurrences which we compute annually, it is a startling figure. It includes the direct, out-of-pocket cost of industrial injuries, motor-vehicle accidents, fires, insurance, and the cost of benefits for off-the-job injuries.

Our company's direct, out-of-pocket cost of accidental occurrences in 1959 was just under $2 million. When we add an estimated amount to cover the indirect (or hidden) costs, the total may be $10 million.

This is a lot of money. It would buy three offshore drilling platforms, or 200 to 250 new service stations, or 300 new diesel-operated tank truck units. You might say we paid for these units but never got them.

Our task is not a simple one and no one has all the answers, but together, by pooling our ideas, I'm sure we can improve this important phase.

The subject "Cycles, Stresses and Safety" is very timely. One of the prices we pay for the privilege of a free enterprise economy is a degree of economic instability. Cyclical ups



H. G. Vesper

This article has been condensed from an address before the Bay Area Oil Industry Safety Conference, San Francisco, June 7-8, 1960.

and downs are generated in the normal course of events. You all know the oil industry today is in a low phase of the cycle with its resultant stresses and strains—and our safety picture is not at all good.

Western Oil and Gas Association's safety figures for 1959 proved quite startling. They showed that the frequency of injuries in oil companies on the West Coast increased 17 per cent over 1958, and the severity increased by 49 per cent.

This increase in accidents at low points in the economic cycle is historical. Richard E. Faggioli, manager of the California Area of Humble Oil and Refining Company, reviewed this effect at the San Joaquin Valley Oil Industry Safety Conference in March of this year. He did an excellent job of tracing the effects of economic change and resulting stress on industrial safety over the last 30 years.

It was evident from Mr. Faggioli's presentation that the desirable downward trend of accidents was reversed in periods of stress:

In 1929 it was the stock market crash;

In 1932 we had reached the bottom of the depression;

In 1939 World War II had begun;

In 1950 we had the Korean conflict.

The problems we currently face within our industry are having much the same effect. For some time oil has been in world-wide oversupply. This has resulted in depressed prices and intense competition for both domestic and foreign petroleum markets.

The adjustments and changes required to meet these conditions have increased the pressures of doing business. Each of us has felt to some degree the stress inherent in this kind of situation.

Whether these adjustments and changes are in terms of reorganizations, technological innovations, or personnel moves, they are potential contributors to stress in people, evidenced by uncertainty, insecurity, and unrest.

But it isn't enough just to *recognize* these pressures and stresses with their effect on safety. We in management must *do something* about them.

On the premise that "actions speak louder than words," I would like to propose a four-step action program for management to meet this situation.

1. *In times such as these, we must maintain our support of proper safety programs.*

Great strides have been made industry-wide in reducing the number of accidental occurrences over the years. To achieve this, many fine programs have been conceived and implemented in companies, plants, individual work units. Such proven efforts must be continued.

We must also, of course, be alert to new methods and techniques in the field of accident prevention. Our record at this moment would seem to indicate pretty conclusively the need for continued efforts by every one of us.

2. *We must look for the safety implications involved in technological adjustments, reorganizations, personnel moves—in every change we make.*

Change is not new to our companies nor to any one of us here today. We have gone from horse and wagon operation to high-capacity truck units during the span of some of our work careers. We have learned to live with these changes when they have occurred at a normal rate. We have shaped our training and development programs to provide for competent, injury-free operation.

Current economic conditions, however, have placed a new challenge upon us. We have been compelled to take a second look at everything we do, and to examine carefully the why and how of our day-to-day operations. The result is that innovation, reorganization, and obsolescence have become more familiar words than ever before throughout our organizations.

There is a risk of overlooking safety in this dedication to doing an even better job. And this would be a serious oversight because eventually we would have to face the consequences.

3. *We must avoid being misled by mythical savings at the expense of safe operations.*

How many of you can detect a familiar ring in these accident report statements:

"We delayed fixing it at the time because we felt we could get by until the next day and we wanted to avoid overtime." One of these cost our company $65,000.

"I knew the brakes were defective, but I thought I could deliver one more load before taking the equipment out of service for repairs." Fortunately, this one only cost us $500, but the potential was infinitely greater.

"I took a chance because I would have been delayed several hours in going to the shop where the proper tools were available." This one took

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The $10-million-dollar cost of accidents to the company in 1959 would have purchased 250 new service stations (above) or 300 new diesel tank trucks (below).



It's Their Business . . . Ours Too

Off-the-job safety can't be engineered or enforced. We can reach the employee only through moral suasion

By EARLE S. HANNAFORD, Ph. D.

Safety Engineer, Long Lines Department, American Telephone and Telegraph Company, New York.

WHAT I DO off the job is *my* business—and that includes safety!

Pretty strong language, but these are the actual words of the majority of employees surveyed on their attitudes toward off-duty safety 15 years ago. We had made the survey to get a better picture of what was needed to sell the off-duty safety we had been pursuing actively on a trial basis in selected employee groups.

"But that's not the story today," you say. And you are so right. Yet, I wonder if we're really aware of what today's off-the-job safety picture is and its significance. Let's talk first about social significance.

Revolutions can be defined as violent changes and upheavals which take place when captive groups explode into action. Social changes are also revolutions. Sometimes, in their better forms, they are also evolutions. The underlying feature is still an explosion of a captive group.

Such an explosion may take place so quietly and gradually that people aren't aware of its significance. Sometimes full realization comes too late for enduring worthwhile effect.

Safety, as we know it in the United States, started on the job and was the result of action on the part of industry. True, the force behind it stemmed from social pressures based on the concept and need for compensation and redress for persons killed and injured in the course of employment. However, it was industry that took command and made safety a human and preventive endeavor rather than a purely compensatory activity.

The prestige figure in safety still is industry. As the authority figure it must continue to play its role as leader. Now the social vacuum of off-duty safety has made itself felt, and it must be filled. Safety of the future will have to treat with the whole individual and not just the role he plays while on the job. The maintenance of each industry's vital corporate image in the community demands that it play its leadership role in safety off the job, too.

The challenge of off-the-job safety can be stated simply and directly:

1. We must bring about realization of the significance of the off-duty safety revolution in time to enjoy full and lasting benefits which accrue only to those who ride the flood tide.

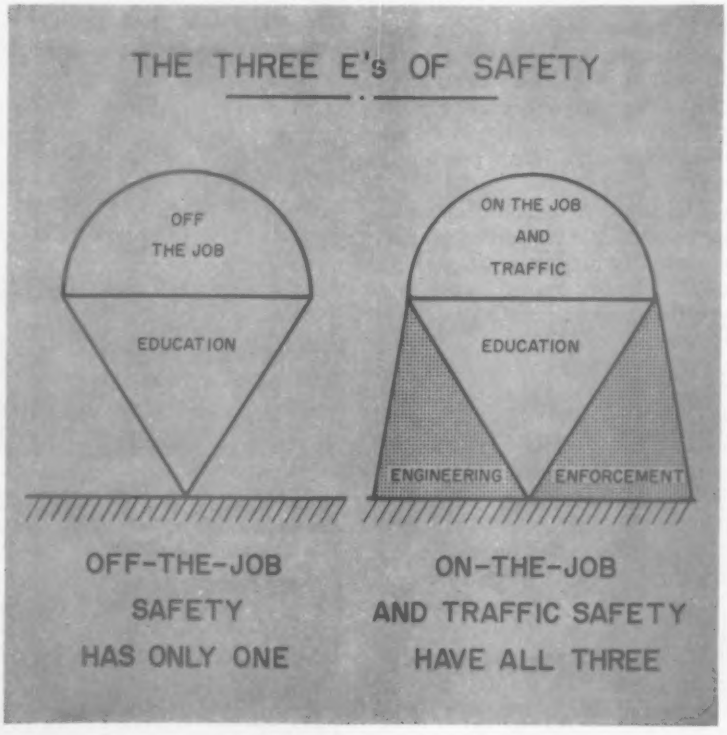
2. New problems and techniques needed to solve them must be recognized and developed.

3. The only one of the Three E's of safety we in industry can use is education. The other two—engineering and enforcement—must come about because people want them. We must inspire desire to fulfill individual responsibilities in terms of action we can suggest.

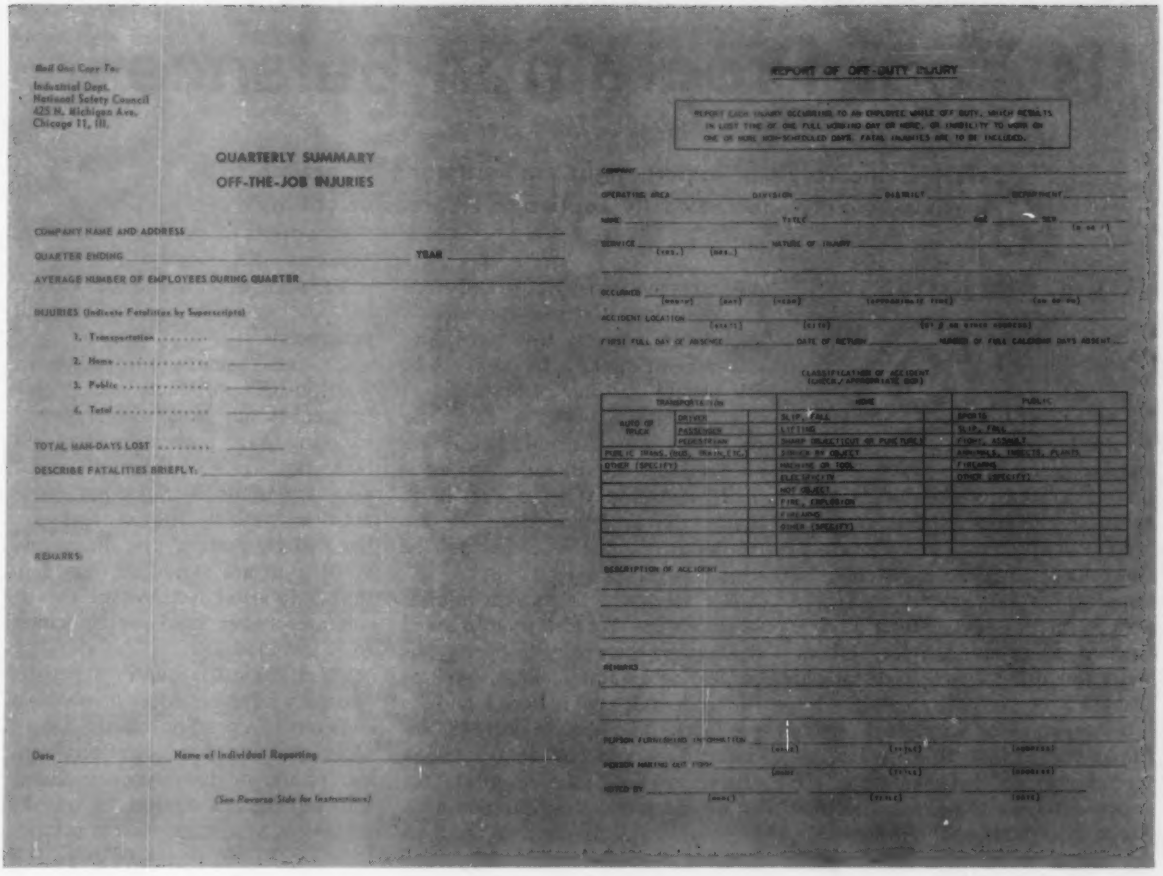
Without engineering and enforcement to support education, we must use education to the limit. For a balanced, sensible attack, we should concentrate on the most effective techniques.

When we compare on-the-job safety results with today's off-the-job results, the challenge is obvious.

Trends and relationships illustrated in this article are typical of



Condensed from an address before the Safety Engineering Club of Baltimore, December 10, 1959.



Mail One Copy To:
Industrial Dept.
National Safety Council
425 N. Michigan Ave.
Chicago 11, Ill.

QUARTERLY SUMMARY
OFF-THE-JOB INJURIES

COMPANY NAME AND ADDRESS

QUARTER ENDING YEAR

AVERAGE NUMBER OF EMPLOYEES DURING QUARTER

INJURIES (Indicate Fatalities by Superscripts)

1. Transportation
2. Home
3. Public
4. Total

TOTAL MAN-DAYS LOST

DESCRIBE FATALITIES BRIEFLY:

REMARKS:

Date Name of Individual Reporting

(See Reverse Side for Instructions)

REPORT OF OFF-DUTY INJURY

REPORT EACH INJURY OCCURRING TO AN EMPLOYEE WHILE OFF DUTY, WHICH RESULTS IN LOST TIME OF ONE FULL WORKING DAY OR MORE, OR INABILITY TO WORK ON ONE OR MORE NON-SCHEDULED DAYS. FATAL INJURIES ARE TO BE INCLUDED.

COMPANY

OPERATING AREA DIVISION DISTRICT DEPARTMENT

NAME TITLE AGE SEX

SERVICE NATURE OF INJURY

OCCURRED

ACCIDENT LOCATION

FIRST FULL DAY OF ABSENCE DATE OF RETURN NUMBER OF FULL CALENDAR DAYS ABSENT

CLASSIFICATION OF ACCIDENT

TRANSPORTATION		HOME	PUBLIC
KIND OF VEHICLE	DRIVER	SLIP, FALL	SPORTS
	PASSENGER	LIFTING	SLIP, FALL
	PEDESTRIAN	SHARP OBJECT(CUT OR PUNCTURE)	FIGHT, ASSAULT
PUBLIC TRANS (BUS, TRAIN, ETC.)		STRUCK BY OBJECT	ANIMALS, INSECTS, PLANTS
OTHER (SPECIFY)		MACHINE OR TOOL	FIREARMS
		ELECTRICITY	OTHER (SPECIFY)
		HOT OBJECT	
		FIRE, EXPLOSION	
		FIREARMS	
		OTHER (SPECIFY)	

DESCRIPTION OF ACCIDENT

REMARKS

PERSON FURNISHING INFORMATION

PERSON MAKING OUT REPORT

NOTED BY

Helpful data for the off-the-job program is provided by the National Safety Council's report from (left) and the Bell System's form.

industry's experience as a whole, though actual rates may differ. Incidentally, the 1958 off-the-job work injury rates are about the same as 1928 on-the-job rates.

This brings the challenge into clear focus. We must use all the experience and know-how we have gained in those 30 years, if we are to get the same improvement in off-the-job safety in as short a time as possible.

Nature of the Problem. We humans so often plunge into action and seek solutions without first determining the nature and scope of the problem. There are seven major problems:

1. The on-duty captive-group approach by itself won't work. On-duty safety is only a springboard.
2. On-the-job captive controls are not possible in off-duty safety.
3. Psychological motivations and incentives of a free-choice group must be used.
4. The individual employee approach must be supplemented with social group appeal.
5. Feminine psychology and its off-duty impact must be recognized.
6. Converting good off-the-job safety attitudes into action is the key to success.
7. Paternalistic overtones must be avoided.

Captive-group aspects of the problem are interesting, because it's only natural to try all of the things that have worked well on the job. It's natural to do this—also easy. More of the same doesn't always work.

Our own company experiences are typical. In 1955, we started our Long Lines women's off-duty safety program. It is planned and controlled by women representing various areas of the company. It is in women's language and psychology and is given to women by women supervisors. We found that a male-directed program just didn't meet women's needs.

Consider these on-the-job safety figures for the first three years the women's off-the-job program was in effect. They represent the standings of Long Lines women in the Bell System based on disabling injuries per million work-hours:

Year	Standing	Rate
1955	19th and last	.93
1956	6th	.39
1957	4th	.30

In three years Long Lines women went from last place in on-duty standings to fourth place. The only factor changed was the starting of a vigorous off-duty safety program in 1955. Interestingly enough, off-duty standings improved very little during the first year, but there was a striking improvement in on-duty safety.

Why did this occur? Because

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Is Your Program in Balance?

Safety is the result of expert, tight administration of proven measures, evenly and constantly applied in all areas of activity

By J. B. HAMBLEN

Safety Director, American Oil Company, New York.

PRACTICALLY all the things we do to prevent accidents and fires can be grouped into seven distinct classes or areas of activities. Unless we're doing some things in each area, our program lacks balance; we're neglecting some avenue of approach to safe operations. If we concentrate all our efforts in one or two areas and neglect others, we're not using all the tools at our disposal.

For example, there are many things we can do to stimulate interest or to get the attention of the people. But we must do more than excite their interest. Unquestionably, we should tell them some things to do and some things not to do. Here are at least two lines of approach—stimulating interest and providing information on how to do the job. We should do some of both.

It is always well to have the problem clearly in mind before we start to solve it. In industrial accident prevention you can sum it up compactly, as I have done for the oil industry in the chart on the facing page.

We are trying to prevent injuries to employees. We also want to avoid damage to company property, its plant, and its equipment, as well as its crude oil raw material and its products. The outline here is influenced by the fact that I am in charge of accident prevention for an oil company. Your problem may be somewhat different, and the tools you can use in solving it may not all be the same as shown in the outline, but you can easily modify it to suit your needs.

In our business, raw materials and finished products are highly flammable and must have special handling. Fire prevention may not be as big a part of the problem for you as it is for us. Since our products are mostly liquid and are handled by pumps, pipe lines, and valves and are stored or moved in tanks, we also have the problems of mixtures and product contamination to be avoided.

In addition to your own people, you may have outsiders involved in difficulty. Depending on the extent to which you have relations with the public or have your products and automotive equipment on the highways, you must prevent injuries

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Safety work involves people—who are influenced by teaching







A BALANCED SAFETY PROGRAM

PURPOSE is to PREVENT

1. Injuries to employees
2. Damage to Company property
   a. Plant & equipment
   b. Products
3. Fires

Public Liability
1. Injuries to others
2. Damage to property of others

People - Safety Teaching

Education

Employee Hears
- 5 Min. Safety Talks
- Safety Contact Slips
- Speakers - Meetings
- Training Classes
- On-the-Job instruction

Employee Sees
- Bulletin Boards:
  - Bulletins on-
    - Safe procedures
    - Recent accidents
- Operating instructions
- Safety Rules
- Fire Regulations
- Safety Guide Books
- Safety Codes
- Job Demonstrations
- Movies, Slides
- Hand Outs
- Pay envelope stuffers
- Circulars to home
- Employee publications

Promotion
- Plant, Department Awards
- Individual Awards
- Safe Driver Awards
- Incentive Plans
- Foreman's Accident Reports
- Plant Accident Scores
- Plant Entrance Boards
- Posters, slogans
- Banners, signs
- Rallies, prize drawings
- Talks to new employees
- Driver road tests
- Dinners, picnics
- Protective equip. displays

Participation
- Committees, Discussions
- Inspection Teams
- Fire Drills
- Suggestion Systems
- First Aid Classes
- Housekeeping Contests
- Contests (various)
- Prepare hazard lists
- Pictures, right & wrong
- "Sponsor" systems
- Accident investigations

Protective Equipment
- First Aid Supplies
- Goggles, Shields
- Hard Hats, Hoods
- Safety Shoes
- Gloves
- Special Suits
- Gas Masks
- Fresh Air Masks
- Safety Belts
- Flash Lights
- Fire Extinguishers
- Gas Indicators
- Skin Creams

Things - Safety Engineering

Equipment Selection, Design, Plant Lay-Out
- Buy safe equipment - machines, tools, pumps, heaters...
- Standardization
- Spacing: buildings, tanks, furnaces, pumps...
- Loading facilities
- Lighting, fencing
- Walks, stairs, platforms
- Handrails, barricades
- Machine guards
- Safety valves, tank vents
- Vapor-proof lights,
- Explosion-proof motors
- Static grounding
- Valve tags, color codes
- Fire water, foam systems
- Fire walls, fire doors
- Drainage, sewers
- Warning signs

Inspection
- Plant & equipment
- Tools
- Work areas
- Job sites
- Hot work permits
- Fire protection equip.
- Housekeeping
- Ventilation, lighting
- Noise level
- Machine guards
- Material handling
- Warehouse, storage
- Supplies, products
- Hygiene, sanitation
- Work practices

Maintenance
- Fix before accident
- Replace before accident
- Remove hazards
- Stop leaks
- Insulate (hot, cold)
- Keep orderly
- Keep clean
- Oil, grease, paint

And things—which are subject to safety engineering measures









Individual fitting is important. Pull up and back on ear lobe, enlarging, straightening entrance to ear canal, making insertion easier. Release lobe. Canal holds protector.

What makes successful hearing protection programs?

How do the workers feel about these devices?

Answers here may tell you . . .

How to Save Hearing

By ROGER B. MAAS, Ed. D.

Hearing Consultant, Employers Mutual Liability Insurance Company, Wausau, Wis.

WHAT DO YOU NEED to make hearing protection programs work? Though last year safety directors and nurses reported in a survey of 1,248 noisy working environments that only 20 per cent of new hearing protection programs were still in effect after six months, there seems to be a slow, steady increase in the number of workers wearing protective devices, both ear plugs and muffs.

Investigation of plants having successful hearing protection ventures reveals interesting information which may be of help to safety and nursing personnel, where efforts have bogged down. Could we be experiencing the same initial difficulty in the promotion of hearing protection today that we experienced with safety shoes, glasses, and respirators yesterday?

Veteran safety workers frequently point to this and say, "The problems with ear protection are no different than those found with any other protective equipment."

A survey conducted by Employers Mutual Liability Insurance Company of Wausau, Wis., revealed that 100 per cent management interest and support is necessary, if efforts to protect human hearing are expected to remain alive. Too often, efforts fail because the problem is ignored or other problems are found to be more pressing. This may be because noise deafness isn't sudden or dramatic.

An *ostrich attitude* toward hearing conservation practices will not save employees from eventual hearing loss which we now know to be unnecessary. We also shall add to our compensation insurance costs, as hearing loss claims are on the increase. Dr. Aram Glorig's article, "Noise, Mountain or Molehill?" in the NATIONAL SAFETY NEWS, June 1960, reviews potential claim costs for us and then explains practical hearing conservation measures which can eliminate or reduce these costs.

Though remarkable progress has been made by machinery manufacturers in eliminating noise at its

REMEMBER THESE 7 POINTS ABOUT EAR PLUGS

1. Plugs should be pliable and fit tightly.
2. Plugs work loose and must be reseated.
3. Plugs do not cause infection.
4. Ear plugs must be kept clean.
5. Ear protectors make it easier to understand speech and warning signals in noisy situations.
6. The best ear protector is the one that is worn.
7. Ear protection must be fitted by trained personnel.

source, and much more engineering noise control is expected in the future, hearing protection devices will and must be a weapon against acoustic insult today.

A review of successful hearing conservation practices shows a pattern of activities conducted at plant after plant. You may wish to try a number of these, or you may even find more effective techniques that work.

Supervision must sell employees on the need and value of hearing protection devices. When employees understand what the protective measure is for, it will be accepted because the employee realizes it is for his own good. Isn't this the approach we take with any protective device?

Supervision needs to make itself an example in the wearing and promotion of hearing protection. How many times we are reminded of this when visitors in our industrial plants tell us how impressed they are when management requires the wearing of safety glasses on plant tours.

It is symbolic of management's consideration for its workers and friends. Likewise, supervisors and foremen should use ear protection each time they enter a noisy working area.

Personal demonstrations are effective. Show the employee the wearing of plugs makes a tremendous difference in obtaining comfort, and ask him to suddenly remove the plugs (which have been properly fitted) in front of his noisy saw, planer, punch press, drop hammer, or other hazardous noise source.

When the nurse or doctor plays a part in the program, we have much greater success in maintaining hearing protection efforts. The fitting should be a prescription, and a nurse or doctor can explain the why of protection and answer many questions frequently asked. Improper fitting has been one of the greatest causes of discouragement and failure in getting protection on the employee.

Many physicians use the audiogram as a motivating device to urge the worker to wear protection faithfully by noting high frequency loss so often discovered in routine preplacement and follow-up audiometric measurements.

The audiogram card is a convincing visual tool that can help make the worker feel the importance of his personal record of hearing acuity. This record tells him something about himself. The worker should be told the wearing of ear plugs or muffs can prevent further damage to delicate hearing nerves.

In plants not having medical supervision, employees can and should be referred to otologists, especially if the hearing measurement indicates any abnormality. The ear specialist can carry out the function of properly fitting and advising the worker on ear protection.

There are many jobs in plants that require a full eight-hour exposure to noise levels even as high as 100 db. We know this exposure to be very damaging. (We are now told that in noise levels in excess of 85 db. in frequencies 600-4800 cps. workers will be aware of a slight change in sensitivity at day's end.)

First of all, every attempt should be made to isolate as many workers as possible from the exposure, e.g. locate the saws, planers, or punch presses in a separate building or try to enclose the machines. If this cannot be done, make the wearing of hearing protection mandatory and include it in the job description. All employees should be told this operation requires the wearing of protective equipment at all times.

There is a growing trend in the promotion of compulsory ear protection. New workers, especially, can be informed of company policy at the time they come on the job.

Employees will be far more willing to wear protectors when they feel they have been given ample opportunity to select the type and size best suited to them. The best way is to show several types of devices to the prospective wearer, explain their features, allow him to examine their construction and feel their softness.

It should be explained that ear plugs will not cause infection or puncture the ear drum. Emphasize that whatever device is chosen will be fitted by the nurse or foreman to be sure it is done correctly, and that he should come back to try another type if the first pair are found to be uncomfortable.

Nurses, safety directors, foremen, and supervisors should be prepared to answer—in their own words—these questions by employees in noisy plants:

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Opportunity for selection is important. Show employee types of protectors, explain features, allow him to examine them. Emphasize the personal fitting of the device.





The workman at the right escaped a possible skull fracture when the iron bar he is holding dropped from a scaffolding and struck his hard hat. Safety Inspector J. W. Petsinger (left) photographs the worker with the safety department's Polaroid Land camera.



Sixty seconds later he removes the finished print. These pictures snapped during plant inspection tours or at the scene of an accident or "near miss" and shown to foremen on the spot result in faster clean-up operations and less down time for machinery involved in accidents.

One-minute prints, taken on the job, provide another tool for the safety program at Armco's Butler Works

Pictures

By J. W. PETSINGER
Safety Inspector, Armco Steel Corporation, Butler Works, Butler, Pa.

WE ARE USING on-the-spot photography as the key to a comprehensive supervisory program. We designed the program to develop leadership and action in accident prevention among our foremen.

Organized around our belief that accident prevention is a line responsibility, the special two-year-old supervisors' safety training program has helped reduce accidents by almost 35 per cent since 1958.

When members of our safety department make their monthly plant inspection tours or visit the scene of an accident or near-miss, they take along a Polaroid Land camera —a camera that produces a quality picture in one minute—to photograph unsafe working conditions and hazardous work practices.

Shown to responsible supervisors on the spot, the "instant" pictures prompt faster cleanup operations and, when quickly converted to two-minute Polaroid slides and projected at management meetings, frequently aid us in determining how an accident was caused and what steps should be taken to prevent a recurrence in the future.

By achieving faster area cleanups and less down time on machines involved in accidents, we have greatly improved our plant's over-all efficiency and production.

The Key Man. Since its founding 60 years ago, Armco Steel Corporation has recognized the foreman as a key man in the plant—not only with regard to production, but in the area of employee safety as well. He's on the firing line, close to the man on the job, and therefore is in an excellent position to instill a respect for safety among the people in his department.

At the Butler Works, which became a part of Armco in August 1927, our efforts to promote in-plant safety have been largely divided into a two-part program:

1. A broad campaign, aimed at our employees in general, consisting of signs, bulletins, safety clothing, employee committees, recognition awards, and emergency equipment.
2. A much more specialized program, aimed at the plant foremen, which would serve as a vehicle for the first campaign by instilling an awareness of safety responsibilities in supervisory personnel, resulting in the development of miniature training courses in each department.

To reach supervisors with this specialized program, we set up a rotation plan to bring foremen into the safety department on an individual basis for a number of weeks to absorb as much as possible about industrial safety and how to put it to work in their respective areas.

Although the program was somewhat effective, it proved a little impractical as it did not reach enough foremen fast enough—it required a tremendous amount of time. Our plant operations are continually growing, requiring a larger working force and more supervisory personnel, and it's impossible for our three-man safety department to do an adequate training job in the office.

About three years ago, we started using a Polaroid camera as an aid to this in-the-office training by snapping one-minute pictures of unsafe working conditions during our monthly plant inspection tours, and showing them to supervisors on the spot.

When a foreman sees the pictures we've just taken of poor housekeeping in his area, or improper use of tools by his men, unguarded floor openings, or poor storage practices, he is much more receptive to our story that "Accidents don't happen; they're caused."

The result is usually a faster clean-up.



Slides from prints. Petsinger lifts a black and white slide out of the camera two minutes after photographing the instant print on the Copymaker. He uses this equipment when copying charts, graphs, and photos taken in the plant for presentation in the company's supervisor safety training program.



In addition to using more than 350 Polaroid slides during the four two-hour training session for foremen, Armco's safety department frequently makes slides from photos snapped in the plant and projects them at management meetings to help determine corrective measures.

Pronto

But even with this additional coverage on the job, the program had serious limitations because it was still on an individual basis. The obvious answer was a group instruction project, so in 1958 we established the supervisors' safety training program—and that's where we really put our Polaroid camera to work as a safety tool.

In-Class Training. Working with our training department, we set up the safety training program as an intensified eight-hour course, consisting of a two-hour session each day for four days. To maintain the feeling of individualized training as much as possible, we purposely held each class to a maximum of 15 foremen.

The contents of the course included a history of the company's safety program; a review of our safety policies; objectives; projects and activities; a discussion of the frequency, severity, and cost of accidents; how to use protective clothing and emergency equipment; the procedure for safety inspections and accident investigations; an outline of our general safety orders and job training guides; and a discussion of our recognition and awards system.

To put across the material in the simplest, most effective manner possible, we decided to illustrate the talks with slides. While some of the slides are taken live in the plant, most of them show charts, graphs and tabular presentations, or are copies of Polaroid prints taken during our plant tours or at the scene of accidents. Because so much of this material has to be updated week by week or month by month to keep the course fresh and alive, we have a quick, convenient way of making the slides.

I do most of the safety department's photographic work, and I'm far from a professional photographer, so we didn't want to switch to a process that requires a lot of photographic know-how.

With the Polaroid camera, I know right away whether my pictures are exposed correctly or if they show what we want them to. If not, I can quickly adjust the camera and take the picture a second time. The camera is simple to use, because there is only one dial that controls the exposure—there are no complicated F-numbers or shutter speeds to adjust.

To solve our slide-making problem we started using Polaroid Land projection film, which produces a black-and-white slide in two minutes in a regular Polaroid camera. After immersion for 20 seconds in a hand-held tank of emulsion-hardening solution, the transparency is placed in a Polaroid snap-together plastic mount, and it's ready for immediate projection.

The projection film comes in two sizes—Type 46, which makes 2¼-in.-square slides for use in a special Polaroid projector; and Type 46-L, which makes 3¼ x 4-in. slides for standard lantern slide projectors. Both films have eight exposures to a roll. Armco uses Type 46 film.

To make a slide for one of our presentations, we attach the camera to the mounting post of our Polaroid Copymaker, which has built-in lights and copying lenses for photographing anything that fits onto its 11x14-in. easel. Then, we place the chart, graph, or photo to be copied on the easel, snap the camera shutter, and two minutes later we lift the slide out of the camera's back door.

We use approximately 350 slides during the four two-hour training sessions, and estimate the cost of each slide at about 55 cents. A Polaroid print costs us about 27 cents. This is a little less than $800 per year for the 4,500 pictures and slides we have taken in two years.

We project the slides on an 8x10-ft. screen at the front of the meeting room so, as an instructor (members of plant management and the safety department) speaks, every course participant knows exactly what he is talking about. The course material is purposely presented in an "I was there" manner to add impact and insure greater retention.

As a supplement to the eight hours of in-class training, we have prepared 150 copies of a loose-leaf, offset-printed manual, reviewing all the material presented during the training sessions. Illustrated with photos taken in the plant, the 97-page manual has been distributed to foremen at the Butler Works and executives at Armco's general offices in Middletown, Ohio.



news briefs

Toe bad

A tobacco manufacturer suffered a delayed and unexpected expense in a toe amputation case when an unwary customer bit into a plug containing a portion of human toe. The judge said, "We can imagine no reason why, with ordinary care, human toes could not be left out of chewing tobacco, and if toes are found in chewing tobacco, it seems to us that somebody has been very careless."

Plenty burned up

Firemen at Grants, N. M., erected a small frame building and planned to burn it in a fire-fighting demonstration during a three-state convention of volunteer firemen. Four days ahead of schedule, it burned to the ground.

Railroading in Russia

An eight-man team of United States railroad officers, who inspected Soviet railroads, report: train safety is stressed, but individual safety is not. Passengers are allowed to ride on top of trains, even trains with overhead electric power, and through tunnels. The inspectors saw no eye protection used, even among men pouring bearings and working at metal-turning operations. Some employees were seen crawling under cars.

Helmet helped

Ray Nitschke, Green Bay Packer linebacker, escaped serious injury when a photographers' tower, 25 feet high, fell on him during practice. The steel tower, weighing 5,000 pounds, was knocked down by a strong gust of wind. A bolt holding the steel piping together pierced Nitschke's helmet completely and stopped just short of his skull. His husky teammates lifted the tower off Nitschke, and he went back to practice.

Fire buffs rebuffed

Passengers who rode an automatic elevator to a floor where a fire was in progress were nearly trapped by the automatic closer. Dense smoke rushed into the elevator, and they quickly changed their minds about watching the fire. The door-closing device would not work because the photo-electric cell was activated by the dense smoke. A door wired this way can be closed by directing a flashlight beam at the electric eye, even in dense smoke.

Defective belt

A man doing high work on a derrick slipped and fell. The ring on his belt broke under the loading, and allowed him to fall to his death. The court allowed a $79,000 award—to be paid by the company that manufactured the ring.

Jewelry not radioactive

Ruthenium contaminated with ruthenium 106 was used in alloys with other precious metals for rings and ring mountings. The AEC has investigated the use of this material, and believes the finished jewelry presents no health problem for wearers of the rings, mountings, or settings involved. The finished products will not be recovered, but fabricators are being required to dispose of their stocks of the contaminated metal.

Another mower hazard

Small gasoline engines that must be started by a sharp pull on a rope present the hazard of back injury if the pull is made too violently or in the wrong position. Now a device that was designed to eliminate the strenuous and dangerous jerking of a starter rope has been reported as the source of an injury. A handyman-type owner tried to take one of the crank-type wind-up starters apart, and the spring flew into his face as he disassembled it.

Study radiation hazards

Johns Hopkins University will set up a department of radiological science to study radiation health hazards. The school will "train radiological health specialists and researchers for both national and international service."

Jim Saul

Shop Without Salesman

Sells Safety Shoes

The small employer or the isolated branch now has visits from a shoe salesman—a silent salesman



Employees examine instruction sheet for step-by-step instructions on how to order foot protection.

A PORTABLE "SHOE SHOP" now enables workers to select styles, fit themselves, and place orders for safety footwear—all without leaving the job or requiring the services of a salesman.

The ProTexU (patent pending) shoe shop has six styles, a measuring device, deduction order blanks, envelopes, style selectors, and large wall posters. It is spotted in various plants for a certain time, then is moved on to another location.

The shoe company will, on request, send a man to explain to management and the workers how the device operates. However, procedure outlined on the apparatus makes it possible for an interested shoe buyer to order the footwear himself.

Developed by Safety First Shoe Company, Genesco division of Holliston, Mass., the portable shop reportedly has these advantages:

1. No on-hand stock necessary.
2. Keeps employee on the job.
3. Easy to move.
4. Employees can inspect sample shoes and make a selection, take their own measurements, write deduction orders, mail them in company-provided envelopes, and expect reasonably prompt delivery.

This device first was tested on a terminal in Ashland, Mass., operated by Branch Motor Express, which employs 79 platform men and city and road drivers. Most of the workers bought safety shoes within a week.

Without additional instructions the shop was sent to the East Providence, R. I., terminal of the same trucking firm. Within three hours a third of the workers bought shoes.

About 40 of the shops will soon be circulated in facilities of the B & O Railroad, the New York Central System, the Chicago and North Western line, the Delaware & Hudson, Central of Vermont, and the Lehigh Valley.

Safety First has developed visual aids to introduce shops to users. Slides show operation of the device from the initial visit of the shoe firm's representative to receipt of shoes by the employee.

"Ole Sam Safety" Honors Feet Shod in Safety Shoes



Button comes mounted on a white foam plastic cushion in a clear plastic box.

The Safety First Shoe Company has started an "Ole Sam Safety" campaign. If safety shoes save the feet of an employee who accidentally has something dropped on them, the company sends in this employee's name and a description of the mishap. The worker receives a certificate and a button. He is now a member of the "Ole Sam Safety" club.



Dial 333!

Prevention is first in the American Motors fire safety program. But if fire should break out, an emergency call will bring prompt help

By CARMAN FISH

EVERY EMPLOYEE in the main plant of American Motors Corporation in Kenosha, Wis., knows the emergency number—333. It's just about the easiest combination of digits to remember and it leaps out in fluorescent red signs at every in-plant phone. Along with the number to be dialed is the location of the phone by building number, department, bay, and section.

That call, everybody knows, will bring the combined resources of the plant security force and the Kenosha Fire Department to the scene.

Employees, however, do not stand by idly waiting for the professionals to arrive. They have first-aid extinguishers at hand, and supervisors and selected workers have been thoroughly trained in their use.

In the over-all fire protection program, this may seem like a minor detail. But it undoubtedly has helped to develop fire safety consciousness throughout the plant. And it is a constant reminder of a serious cause of large-loss fires—delayed alarms.

An automobile plant has some king-size fire problems. Vast quantities of flammable solvents and motor fuels are used, and long assembly lines and conveyor systems make large open areas inevitable. Limitation of hazard by fire walls and fire doors is practicable only for high hazard areas. Automatic detection and extinguishing equipment, plus human vigilance, must compensate for conditions which cannot be corrected.

The Plant. The main plant, located within the city limits of Kenosha, now covers an area of 111 acres, with 3,287,806 square feet of factory floor space. To the original buildings, inherited from Nash Motors, have been added nearby plants purchased from other indus-



Nerve center of the plant protection system is the main gate house. Eight boxes, connected with the city fire department, carry numbers corresponding to plant gates. An emergency call is relayed at once and confirmed by phone.

tries and remodeled, as well as much new construction.

Security Organization. The fire protection triangle at American Motors might be said to consist of the corporation's Plant Security Department, the Kenosha Fire Department, and the insurance carriers.

Within the corporation, safety and plant security measures are well integrated under the direction of G. C. Berteau, personnel director. Working closely together within the organization are A. M. Thomsen, safety director, and M. W. Sund, director of plant security. In direct charge of fire-protection activities is Ted Smith, who serves the city as assistant fire chief and the plant as fire marshal.

A veteran of 30 years of fire fighting, Ted Smith is no smoke eater. In his younger days, he admits, he got a thrill out of following the fire engines but now his interests are chiefly in prevention. There are few phases of the subject he hasn't explored—from the handling of flammable liquids to the psychological factors in arson.

As assistant fire chief for the city, Ted spends 24 hours on duty and 24 hours off. On his off days, he will be found at the plant, training the security force, conferring with insurance engineers, studying processes and equipment, and looking for ways of tightening up the plant's defense against fire.

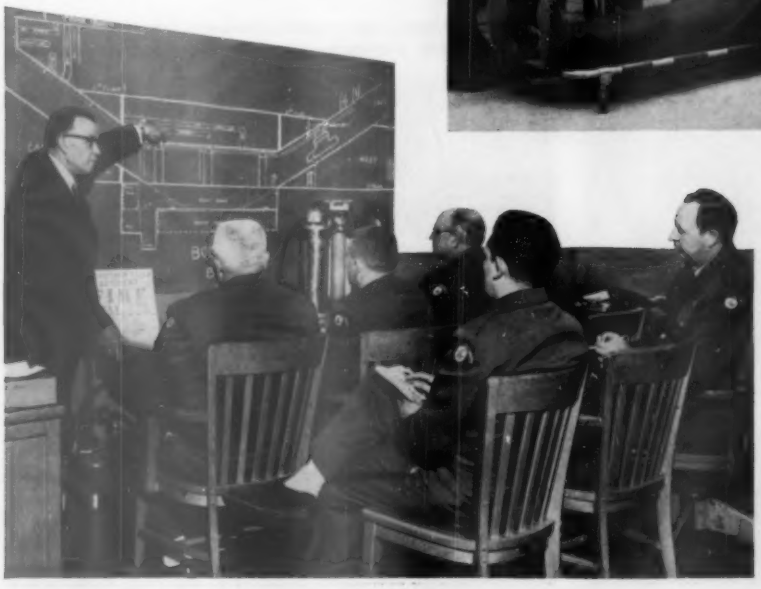
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Dip tanks are hazard spots in an automobile plant. Automatic systems are backed by trained guards with portable apparatus.



▲ First-aid is part of the plant guards training. In case of electric shock, asphyxiation or heart attack, they are soon at the scene with oxygen apparatus.



◀ Plant guards know the plant. Here Fire Marshal Ted Smith explains the problems of a dip tank to a training class. It takes two years to develop a seasoned guard.

Now that fall is here, the woods will attract over-eager, under-experienced nimrods. Heed these 10 Commandments of Hunting

HUNT without hazard

TO HUNT IS EASY. To hunt safely, keeping in mind that more important than killing a wild animal or bird is *not* to kill or wound yourself or some other human being, requires thought and preparation. But the rewards are great and more satisfying.

Along this firing line, the editors of *Southern Telephone News* took themselves and several members of the Mississippi Game and Fish Commission on a safety safari. The purpose: to obtain a few pictures illustrating do's and don'ts of hunting. The resulting comments and photographs follow.

Starting this month, when the first doves begin to light out for their afternoon feedings, continuing clear on through the early winter, a hunter can find his share of just about any kind of game he cares to hunt.

Squirrels flit from tree to tree. Quiet, cautious deer roam the woods. Flocks of ducks fly over the large rivers and lakes on down a half dozen flyways to migratory havens. Pheasants crawl through the underbrush, to explode in feathered fury and glide downwind away from a surprised and outfoxed hunter. You name it. This country has it to offer the outdoorsman with a shotgun or rifle in his hand.

Yet, the crowded timber tracts, inexperience of novice nimrods, and eager nervousness that goes with stalking game can all add up to personal disaster. The smart hunter will do mighty well to follow what are commonly called "The 10 Commandments of Hunting Safety."

1. Treat every weapon—loaded or unloaded—with the respect due a loaded gun. You've read too many stories about "I didn't know it was loaded" to bypass this precaution.

2. Carry your weapon properly . . . keeping it unloaded when not in use . . . taking it down or having its firing action open . . . lugging it in a case to the shooting area. These suggestions aren't malarky. Someone somewhere had to find out about them the hard way. Take a note from another fellow's mistakes.

3. The gun barrel is often the cause of accidents. Make sure yours is clear of obstruction—the action, too—and that you have ammunition only of the proper size for the gun you're using. Remove oil and grease from the chamber before firing.

4. Don't forget. Handle your gun so you can control the direction of its muzzle. This covers the unexpected, such as stumbling over that branch you didn't see buried in the leaves. While you're at it, keep the safety on until you're ready to shoot. It just takes a flick of a finger, and the safety catch can mean the difference between breathing and burial.

5. The woods are magnificent, inspirational—and dangerous, with accident possibilities all around you. Be careful. Never climb a tree or fence or jump a ditch with a loaded gun. It could—and does—discharge quite easily.

6. When you *are* ready to shoot, make absolutely sure of your target before you squeeze the trigger. Always know identifying features of the game you're trying to hunt. This means waiting those few additional seconds until the quarry emerges from cover and confirms the outlines and coloration of a beast or bird, not a carefree careless guy out on his first hunt.

7. Never point a gun at anything you don't intend to shoot. That's a rule many men learned in service. It applies to hunting as well. That

DON'T stand up in boat for a shot. The recoil may knock you into the water. And a ricochet could kill or wound.



DON'T climb into a duck blind or on any other structure with your gun held this way. Lay gun down, pointing away.



hunters should avoid horseplay should go without saying, but it's a necessary reminder to some practical-joker types.

8. Children present on or near a hunt can be a problem. Unattended guns should always be unloaded. Guns and ammunition should be stored away from the reach of curious youngsters. Like alcohol and driving, it might be a fair rule of thumb to say, "Children and hunting don't mix." . . . at least not until the child is up in his teens and well-versed in what makes for safe shooting.

9. It's peculiar, but even when everything is apparently going well and each detail thought of for maximum safety and enjoyment, some hunters make costly errors. They'll shoot at a flat hard surface on land or at something swimming along water, where bullets can ricochet. And before you shoot at target practice, make certain your backstop is adequately thick and positioned safely.

10. One last rule is every bit as important as any of the preceding recommendations. Don't drink alcohol and hunt. As in driving, once again, fermented grape juice and a hunting expedition have nothing in common, except accident potential. Drinking has no place in the field while you're after game.

Safety rules are necessary—always. But even well-disciplined safety-conscious nimrods often find

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Left: DO carry guns in case to shooting site and pointed rearwards in your car. This is a double precaution, saves lives.

Below: DO climb into duck blind this way, with gun laid on blind and pointed away from climbing hunter.





Left: DO carry your guns these ways—muzzle pointed upward or downward. If hunter stumbles and gun discharges, the shot will go into air or ground.

DON'T make the mistake these two jolly hunters are making —carrying gun with muzzle aimed at chin or somebody else.



DON'T climb fences this way, with gun leaned against fence post or, in hands of another hunter, aimed at climber's head.





Perched high on the side of an office building, this worker for the Student Window Cleaners depends for his life on the quality and strength of the safety belt and window anchor bolts.

IT'S A LONG WAY DOWN

By CLARENCE W. ROSE

President, Rose Manufacturing Co., Denver, Colo.

A WINDOW CLEANER stands on a narrow window ledge high above the street and looks down. He's not afraid. He's used to it. He feels as calm as you do in your office chair —probably much more so, if you happen to be watching him just outside your window.

It's a matter of conditioning. The window cleaner spends much of his working day on high window ledges with a bucket of wash water and a squeegee. He has become thoroughly accustomed to the feeling. He feels afraid only on some new job, when there is something different in his situation as, for instance, a different type of safety belt he hasn't used before.

Unfortunately, he's often completely unafraid even though his life is in grave danger because of defects in his equipment—defects about which he is totally unaware.

How do I know these things? I was the guy on the narrow ledge for a long time. As a younger man, I spent many years as a window cleaner and later as owner and manager of a large window cleaning firm. A student at the University of Colorado, I washed windows to pay college expenses.

With my brother, Walter, I founded the Student Window Cleaners in 1915. Eventually this organization became a large company with operating branches in 15 cities from Denver to Houston. College students on a part-time basis were used as the labor force.

Safety problems persisted throughout this phase of my career. Accidental deaths made me determine to find the hidden causes of accidents and eliminate them. This led to study, research, consultation, and to the designing and testing of new types of safety equipment.

I have visited and discussed safety at engineering schools, testing laboratories (including Underwriters' Laboratories and the National Bureau of Standards), and with makers and users of window cleaning and other safety equipment.

None of these sources could give adequate or completely satisfactory answers to the safety problems involved. Answers had to be dug out the hard way.

The success of this effort is indicated by the fact that in one period during which the Student Window Cleaners paid more than $30,000 in insurance premiums, the loss ratio was seven and one-half times more favorable to the insurance carrier than the average of all workmen's compensation risks carried by it.

The earlier experimental designs of safety equipment were made in harness shops, and other ill-adapted or inadequately equipped establishments. The Student Window Cleaners needed their own sources of supply and a laboratory equipped solely for their own use.

We established a small plant. Selling these new type belts to the window cleaning trade was extremely difficult. The chief reason seemed to be that they were so radically different from belts made by their traditional suppliers, who had little or no contact with organizations such as the National Safety Council and the American Society of Safety Engineers. This manufacturing subsidiary began studying safety problems unrelated to window cleaning and in a few years developed into a major operation.

The window cleaning operation was later sold to an employee. Several branches are still operating under the name and policies of the original Student Window Cleaners. Members of the student labor force of those earlier years are now prominent lawyers, doctors, engineers, and other leading citizens in many walks of life.

Just how dangerous is window

cleaning? Here is a startling illustration. If you had a small industrial plant, employing 900 people, and if that plant had a record of 15 deaths in two years from only one accidental cause—falls—that plant could be rated in the same hazard class as window cleaning.

This appalling record was revealed a few years ago by the National Safety Council and showed this death rate in window cleaning to be more than 44 times as great as from all causes in the manufacturing industry for those same years.

Why this shocking record? There are many reasons, including unsafe work practices and the weakness of some anchor bolts, but the chief cause is undoubtedly the total inadequacy of most belts now in use.

Few of them could pass the test specified in the new American Standard Safety Code for Window Cleaning, published in 1960 by the American Standards Association, Inc., 10 East 40th Street, New York 16, and formulated by a technical committee, national in scope, organized in 1952 under the rules and procedures of the American Standards Association, Inc.

This new safety code includes rules for safe washing of windows as well as specifications for safety equipment used in such operations. The provisions of this code are the result of extended, careful consideration of available knowledge and experience on window cleaning. These provisions are intended to recommend minimum requirements for use by employees and building owners, and for adoption and enforcement by administrative authorities.

This code stands alone as the most recent and most authoritative guide to safety in this dangerous occupation. It replaces the previous American Standard code, which was 27 years old and thoroughly obsolete and inadequate.

The test this new standard sets up for window cleaners' belts is that a 350-lb. rigid weight be fastened into the waist band of the belt and then dropped in a free fall for 4 ft., with only one of the terminals attached to a rigid support. Also it is specified that all belts be maintained to meet this requirement.

This 350-lb, 4-ft drop test will be recognized as realistic and not too severe, if it is realized that the most frequent and often tragic fall of a window cleaner occurs as he is going in or out of the window. At that moment he can have only *one* of his safety belt terminals fastened.

He is exposed to this hazard twice at every window he washes. In a fall from this precarious position, in his waist belt he slides down the terminal strap or rope to the bottom terminal and hits it with all the impact force of his free fall for a distance up to about one and one-half times the width of the window.

This tremendous amount of kinetic energy must be decelerated by the belt, and the impact must be supported by only one of the building anchors. It puts a real-life test on that possibly weak anchor bolt, as well as on the terminal line, the entire waist belt, and on the connection between the waist belt and the terminal line.

This points up the fallacy in most window cleaning belts now in use. They have not been designed to take that kind of impact test. It has not been presumed that the belt would ever be subjected to an impact. Only the normal or positioning use was visualized. The emergency or impact use has been quite generally overlooked.



Most of the accidents and falls that involve window cleaners occur as the worker is climbing into or out of the window while one belt terminal is attached.

Give this drop test to an old belt.

If it fails to pass, then others of similar appearance should be condemned, tested to destruction, and saved for future use in judging belts. However, it might be enlightening if some of these additional belts are given lighter tests of 3 ft, 2 ft or 1 ft to determine for future guidance and inspection how weak these belts really are.

Failure of these tests by a belt means a window cleaner very likely would have been killed. Think about this as you are testing. As a preliminary guide in determining which belts are not likely to pass this test, look for three things:

If the terminal line is a single strap of leather or webbing.

If the body belt has a tongue buckle in a web of leather strap.

If the fixtures which hold the terminal line (straps or one or two ropes) are *riveted to—and not penetrated by*—the body belt, then such a belt will almost certainly fail the test, even if new.

1. Does the belt have any means of limiting the impact loading on the building anchor?

2. Will the safety rope hold, if the service rope is cut or broken? (An adjustment hitch normally holds in one direction only. If the "safety line" is a continuation of the service line and pulls the wrong way on this hitch, how can it possibly be called a "safety line?")

3. If an open hook is the only link between safety and death, how strong is it and in a fall can it be pulled with any side twist or angle that would increase the danger of its opening and releasing the man?

4. Does your belt give protection from wear and against inadequate inspection? Does it have two separate lines so arranged that the service line takes all the wear and the safety line cannot be adjusted into service but must be held in reserve, without wear, for final dependence in case of a fall?

5. Does your belt have a single web or leather strap between terminals? If so, it cannot divide the wear or divide the impact force, but it can and does concentrate all the force on the fall into a single sudden stop, causing a dangerous severe strain on the man, the belt, and the building anchor.

IDEAS THAT WORKED

Devices and Ideas to Help Your Safety Program

By Arthur S. Kelly, Industrial Department, NSC

Got Tickets for THIS World Series?



The World Series may be over before this Idea That Worked appears in print. We apologize to the contributor if this is so. Here is how the game works. Starting on the first day of the month, the runner is advanced part of the distance towards the base for each day worked without a disabling injury. It's easy to see that, if an entire month passes, the runner will reach home plate with a score.

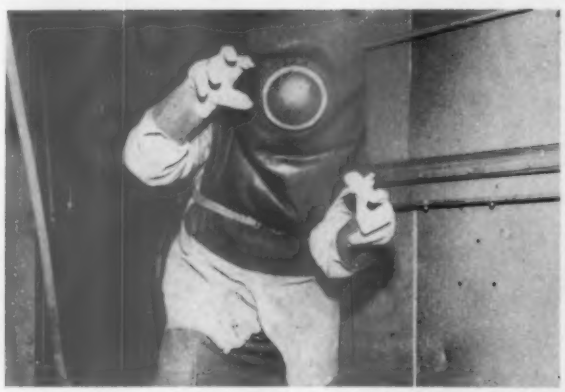
The idea was developed by Tom Fraser, Murray-Brantford Limited, Brantford, Ont., Canada. This plant manufactures roofing and siding material and employs an average of 110 employees. They have built up a record of more than 425,000 man-hours since their last disabling injury in June, 1958.

Mr. Fraser's idea was submitted to this department by R. Cosgrove, Safety Department of the Dominion Tar & Chemical Company, Montreal, the parent company for Murray-Brantford Limited.









THE WINNER

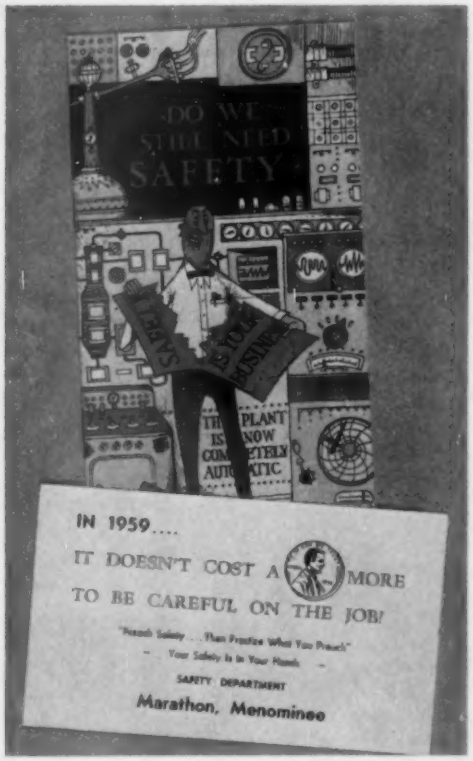
Prizewinner in September issue was "Accident Marker." Portable sign is placed at accident scene, with mirror, skull, words: "Our last accident occurred here. Will you be next?" By C. W. Talbot, Industrial Generating Co., Rockdale, Tex.

Hazards or Halloween?

◀ If your children are hard pressed for a new idea for Halloween, perhaps they could get a suggestion from this idea. It was featured in a picture story in the plant newspaper Halloween a year ago and dramatized the grotesque-appearing equipment and clothing employees wear every day to protect them while at work.

This gimmick was submitted by W. R. Cocke, Jr., Safety Administration and Personnel Practices, General Electric Company, Erie, Pa.

Left, top to bottom: gas mask and safety gloves for chlorine gas used in water treatment; welding hood and safety gloves; respirator and safety glasses for painting; and shot blast suit.



Penny Promotion

▲ Recently we received an avalanche of special promotional material developed and used by Edward D. Christensen of Marathon, a division of American Can Company, Menasha, Wis.

We decided to classify it into groups and to publish each group separately. We present the first idea this month, because it does an excellent job in showing how National Safety Council employee booklets can be used more effectively by local adaptation, rather than by passing them out with pay checks or as handouts in various departments.

The booklet, *Do We Still Need Safety?*, was sent to the home of each employee at Marathon, along with the card with the penny on it.

A NATIONAL SAFETY COUNCIL
TECHNICAL SERVICE

DATA SHEET 497

PORTABLE REAMER-DRILLS*

Copies of this data sheet will be available for order within 30 days

This data sheet is one of a series published by the National Safety Council, reflecting experience from many sources. Not every acceptable safety procedure in the field is necessarily included. This data sheet should not be confused with American Standard Safety codes, federal laws, insurance requirements, state laws, rules and regulations, or municipal ordinances.

Introduction

1. This data sheet discusses safe practices in the use of portable equipment for drilling and reaming. This equipment may be powered by air, by standard 60-cycle electricity, or by high-cycle (180 cycles per second) electricity.

Hazards

2. Various hazards may be encountered in the use of portable drilling and reaming equipment:

a. Tools may be dropped on the feet and toes.
b. Injuries may be incurred from flying chips, from flying parts when bits break, or from contact with revolving bits.
c. Materials, machines, or air hoses may whip about.
d. Loose or frayed clothing may catch on revolving parts.
e. Electric shock may be caused by improperly grounded electric tools.

Personal Protective Equipment and Clothing

3. Operators should wear safety goggles, hard hats, sturdy foot and leg protection, and heavy-duty gloves. No loose or frayed clothing and no jewelry or long necktie should be worn.

Safeguarding

4. Where possible, the switch on a reamer-drill should be of the constant-pressure type; it should never be fastened in the "on" position.

High-Cycle Equipment

5. A reamer-drill which operates on an electrical frequency of 180 cycles per second is referred to as a high-cycle tool. In this application, the term "high-cycle" has no relation to the speed of rotation of the spindle.

6. Certain advantages are derived from the use of 180-cycle alternating current for portable reamer-drills. Such tools can be made much lighter per unit of power than those using ordinary electric current and will stall before they develop a high overload torque. These features are desirable from the viewpoint of both safety and utility.



Figure 1. Portable reamer-drill operators outfitted with personal protective equipment that includes hard hats, shin guards, safety goggles, heavy gloves, and foot shields. (Courtesy Bethlehem Steel Co.)

*The term "reamer-drill" as used in this data sheet refers to any tool in which a reamer or drilling bit may be used.

7. A disadvantage of the high-cycle equipment is its tendency to continue rotating after the power has been turned off. To overcome this problem, dynamic braking is often employed.

8. In this form of braking, direct current (DC) of safe magnitude is sent across one of the phases of the motor winding until the motion is stopped. The high-speed rotor generates and circulates a current in its winding, which causes the stored energy of acceleration to be transferred rapidly into heat and thus provide the braking effect. Generally, the spindle stops after three or four revolutions.

9. The case of every electric reamer-drill should be grounded through one lead of a three-wire cord to a polarized outlet.*

10. When an electric reamer-drill is used near a welding operation, the tool should never be placed on steel being welded unless the steel is properly grounded.

Air-Powered Equipment

11. Air-powered drilling and reaming tools** usually have a vane-type rotary motor. A governor controls the free speed and thus prevents the tool from racing. It also delivers additional air to the motor as the load is applied.

12. Before the pressure is turned on, air hose connections to air outlet valves must be checked for tightness. Pressure should not be turned on when anyone is standing in front of or over the outlet.

13. To prevent the air hose from whipping in case a coupling breaks, the hose should be attached to the tool housing by means of a short chain. Chains should also be used between sections of hose.

14. The operator should turn off the air valve and bleed the hose through the machine before he disconnects the air hose from his machine.

Bits and Spindles

15. Reaming and drilling bits should be sharp and true and should be ground to produce short chips instead of long shavings. Use of a dull bit is likely to result in its breakage.

16. Too small a bit will invariably break. An oversize bit may "fire up" to the extent that it freezes in the hole and then breaks. Furthermore, a frozen bit may cause unclamped or insecurely clamped work to spin, with possible injury to the operator and damage to the equipment.

17. Whenever possible, only one extension should be used on a spindle. Use of more than one may cause the spindle to rotate out of true and the bit, therefore, to bind.

18. The bit should be kept straight when it is being inserted into or pulled out of a hole so that it will not "bite fast" and thus cause the handles of the tool to rotate. Extra care should be taken with bits having two or three flutes since such bits have a tendency to bite or stick.

19. When a deep hole is being drilled beyond the flutes of the bit, the bit should be removed frequently and the chips cleaned out. If the chips are allowed to pile up, the bit may become jammed, with results similar to those of freezing.



Figure 2. Secure footing, solid stance, and ease of body position will lessen physical fatigue and stress while operating a portable reamer-drill. (Courtesy Bethlehem Steel Co.)

20. The operator should never use his hand to guide the bit into the hole or to slow down rotation of the spindle.

Operating Procedures

21. Before using a reamer-drill, the operator should make sure that he has good secure footing, especially when he has to work above ground level. All scaffolds must be securely based, and guardrails and toe boards should be provided.

22. The operator must hold the reamer-drill securely at all times. He should try to press it against his body so that his weight and strength will help him control the tool if the bit binds. If he has secure footing, a solid stance with ease of body position, and a proper hold on the tool, he can usually prevent the handles from whipping if the bit sticks.

23. Before working on light material, the operator should see that it is firmly tacked down or clamped so that it will not bind on the bit and whip around. He must never attempt to keep the material in position by holding it with his hand or by standing on it.

24. The operator should use a reamer-drill in a corner or other cramped location only when he is authorized and required to do so. If a special corner reamer-drill is available, he should use it instead of the ordinary tool.

25. Before using an ordinary reamer-drill under such difficult conditions, the operator should make certain that he can hold and guide the tool. If he must remove one handle in order to have enough room in which to work, he should first consult his foreman. The remaining handle must be supported against a solid piece of steel to keep the tool from turning. A hand grip attachment should be used on the back of the tool wherever possible.

26. When operation of a reamer-drill requires two men, if possible, employees of approximately the

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*Also see Data Sheet 299, *Grounding Portable Electric Equipment*, National Safety Council.

**Also see Data Sheet 392, *Air Powered Hand Tools*, National Safety Council.

same height should work together. They should stand on opposite sides of the tool, facing each other. Each man should grip one of the handles with both hands in as secure a manner as possible—a grip that will most help to prevent the tool from going out of control should backlash occur.

27. All work should be properly center-punched before drilling is begun.

28. If a machine develops heavy vibration, the operation should be stopped and started again.

29. The operator should never attempt to remove a broken drill or reamer bit with a center punch or a hammer. A wooden block should be used between the bit and the striking instrument.

30. Reamer-drills should be kept on individual stands when not in use. To lift the tool, the employee should use the strength of his legs, bending at the knees and keeping his back straight.

31. Use of a lubricant containing carbon tetrachloride as a coolant should not be permitted. This compound is highly toxic.

32. Air hoses, electric cables, and extension cords should be placed where they will not present a tripping hazard or be subjected to damage from mobile equipment. Preferably, the hoses, cables, and cords should be suspended over aisles and work areas. When they must lie on the ground, they should be protected by boards on both sides or should be bridged with runways.

Defective Equipment

33. For safe operation, reamer-drills must be kept in good condition. Before being issued to employees, the tools should be thoroughly inspected and necessary repairs should be made.

34. Employees should be instructed never to use defective tools, but to turn them in immediately for inspection and repair. Poor operation indicates that a tool is defective. Electrical shorts and failure of the machine to stop when the switch is turned to "off" position are specific examples of unsafe conditions.

35. A bit with dull edges, burrs, or nicks is unsafe and should be turned in for regrinding or disposal.

ACKNOWLEDGMENT

This data sheet was prepared by the Fabricating Industry Committee of the Metals Section, National Safety Council. It has been extensively reviewed by members of the National Safety Council and by representatives of chapters of the American Society of Safety Engineers. It has been approved for publication by the Publications Committee of the Industrial Conference of the National Safety Council.

CONSULTATION CORNER

Questions on accident prevention, fire protection and occupational hygiene are answered by mail. A few are selected for publication

By L. C. SMITH, Industrial Department, NSC

Is Static Electricity Dangerous?

Question: In one of your publications appears the statement, "Clothing made of synthetic fibers should not be worn in gaseous, explosive, or high-oxygen atmospheres, because of the fabric's ability to release static electricity or sparks."

In discussing this statement with men in our electrical department, they do not agree the sparks are "hot" enough to be dangerous. They also expressed the feeling that to their knowledge there never had been a case where a fire had been started from this source. Do you have any further information?

Answer: There have been many studies in this field, and while there may be differences of opinion, predominant evidence points to the fact that static sparks from synthetic fiber clothing can cause explosions in gaseous, explosive, or high-oxygen atmospheres.

The U.S. Bureau of Mines has conducted a great deal of investigation in the field of static electricity and is considered to have the most reliable knowledge on the subject. This agency also has presented demonstrations at the National Safety Congress and at numerous other gatherings to show static sparks from synthetic fibers igniting gaseous and high-oxygen atmospheres.

The National Fire Protection Association in their codes for hospital operating rooms recommends that "silk, wool, or synthetic textile materials, except rayon, not be permitted in anesthetizing locations as outer garments" because of the possibility of static sparks.

Powder and explosives-making companies will not allow synthetic fiber clothing to be worn in certain manufacturing areas. These precautions are taken because it has been proved that synthetic fibers produce static sparks which can cause an explosion.

Consequently, we are convinced, synthetic fibers produce static electricity and should not be worn in gaseous, explosive, or high-oxygen atmospheres.



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It's Their Business

—From page 119

people were conditioned to think of safety as something on the job, and they converted their safety urges into action on the job rather than off duty. After the first two years, there was decided improvement in off-duty results. It took place when we learned to orient our approach to free choice needs and folks began to relate safety with off-duty activities.

Because the usual captive-group controls of enforcement and engineering are not available to us in off-duty safety work, we must not assume their existence when we work off-duty safety measures. On the other hand, failure to use certain on-duty program standbys as a springboard is also a bad mistake.

Psychological motivations and incentives of free choice social groups are absorbingly interesting and most effective when understood and properly used. No man lives unto himself alone and, as psychologists and psychiatrists well know, it is necessary to consider and treat the individual in terms of family and other social groups. In fact, often the entire family must be treated as a whole in the same way we treat individual and working group needs on the job.

It's often said, "Never underestimate the power of a woman." We should take a look at the women who are pattern fixers in our free choice social groups.

Universal Accidents. Keep in mind that analyses of accidents and their causes vary with industries and companies. But basic causes are the same, even though one rates high for a particular company and low for another. In all companies there are accidents which could have occurred on or off the job, since they do arise out of or relate to specific tools, equipment, or practices peculiar to the job.

For instance, in our company two-thirds of our on-the-job injuries are types that could have occurred either on or off the job. More than half our employees are women. For other companies the reverse may be true. By operations or departments it looks like this in several of our typical groups:

Typical Dept.	% Injuries that could be on or off job
Plant operations	50
Traffic (telephone operating)	91
Engineering	92
Administrative offices	94
Company-wide totals	67

Percentage of on-duty injuries that could have occurred on or off the job:

Specialized craft work	50
General industrial work	70
Office work	95

For industry, as a whole, the variation in percentage of injuries that could have occurred either on or off the job is estimated to range from 20 to 70 per cent.

In every industry these injuries provide a springboard to off-the-job safety, since preventive measures developed and used for them can be designed to form a natural transfer of safety knowledge. Dual applications of such preventive measures should be stressed.

Looking closer into the cause of injuries, we found in our own case falls which could have occurred either on or off the job accounted for more than one-third of all our injuries both on and off the job.

Motor-vehicle injuries are another type that provides a good springboard. This is a list of causes of off-the-job accidents in order of occurrence:

Men	Women
1. Motor vehicles	Falls in home
2. Sports	Falls in public
3. Falls in home	Motor vehicles
4. Falls in public	Sports

One more on-the-job springboard demands our attention. We all know records and analyses have been indispensable in finding and setting our targets in on-the-job safety. Without them we should have been unable to call our shots and concentrate our efforts, where most needed.

Records and analyses of off-duty accidents will do the same fine job. It takes work and plenty of selling to set up reporting procedures, but it really pays.

The Council's report form for off-the-job accidents gives a basic



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For operating economy, recovery of Chlorothene NU for reuse is easy and practical—often with equipment already in the plant.

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classification. By amplifying the report to provide a little more information, you'll have all you need for sound analysis. And by reporting to the Council on off-the-job accidents, you gain a powerful tool for maintaining interest.

The Bell System plan for recording and measuring off-duty safety performance and the basic report form are based on the Council's 312 hours per month exposure figure per employee for off-duty injury experience.

Good reporting brings these results:

1. Permits analysis on causes.
2. Gives leads as to where and what problems to attack.
3. Provides a measure of results and progress.
4. Reports the results of their efforts to those participating.

Drives and Motivations. Ever since Dale Carnegie's famous *How to Win Friends and Influence People* caught the public fancy, interest in the drives and motivations of so-called free choice groups has been at high pitch. Ability to get folks to do something, when the captive group controls are absent, is an intriguing thing.

From our standpoint there are four simple steps in the process:

1. Use of mass media, such as slogans, posters, movies, or mailed-to-the-home items.
2. Personalization for the individual into a will to do.
3. Triggering of actual action based on the will to do.
4. Maintaining and keeping action alive.

When we began our company off-duty safety program with discussions in on-the-job meetings, the women's rates were so much higher than the men's that we concentrated on women with the Long Lines women's off-duty program mentioned earlier. We personalized it for women but not for men, even though we fed men plenty of off-duty material.

As a result, the women have made steady improvement while the men's performance has been sporadic with no firm improvement. Now that we've tested the value of personalization we'll apply it in the men's field.

Discussion leaders' guides have provided for maximum individual participation, *doing* items off the job and carefully chosen take-home items, since they seem to have high impact and appeal for women.

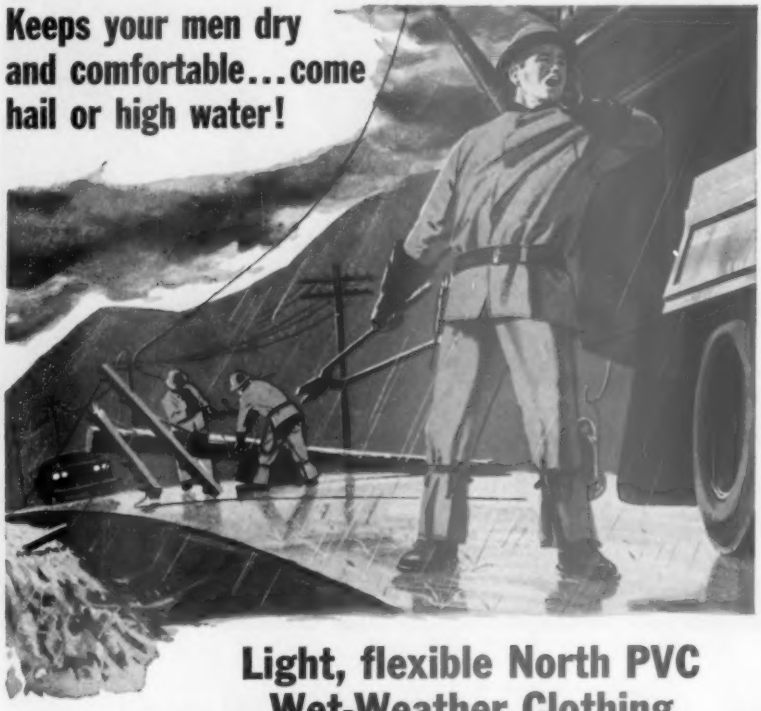
Women's booklets, with humorous sketches on the front covers, include: *It's a Woman's World; You're So Smart To Be Safe; Horsepower, Hoopskirts and Highway Safety;* and *A Woman's Way to a Happy Summer.* One that tied in with men's off-duty safety activities was *It's So Nice To Have a Man Around the House.*

To personalize and sell people you have to contact them personally. That's why all our women—15,000 of them—attend at least four off-duty safety sessions a year in groups of 10 to 16, so there can be plenty of individual participation and discussion.

For getting the message across to families and to community groups, here are several tested activities:

1. Off-duty safety at homes. These sessions, held evenings at

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Light, flexible North PVC Wet-Weather Clothing

For head-to-toe protection against wind, rain and sleet, outfit your men in North PVC linemen's foul-weather gear by Jomac. It's rugged as all get-out: coated on both sides, with all points of strain reinforced and all seams completely sealed by electronic welding. Yet it's light and flexible . . . and the jackets have set-in sleeve design and generous cut that allow full freedom of motion. It's safer: comes in a bright "safety" yellow for maximum visibility. And it lasts: will not crack, flake or peel, in use or in storage . . . extremely resistant to abrasion and snagging . . . wonderfully easy to wash. Write for literature!

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Seams are stitched with synthetic thread, then shielded and electronically welded for maximum strength and protection. In addition, buttons are electronically welded in place.

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company locations, are planned and conducted by employee committees. Something of interest is provided for everyone from the youngsters up.

2. After-hours first-aid classes for family groups. First-aid training is a proved safety measure. The American Red Cross is pleased to cooperate in giving their new 10-hour course, which stresses safety along with first aid.

Another approach has been to provide women's off-duty safety materials for men to take home to their wives, mothers, and friends. This was started because of many requests from male employees.

Actual participation is important. It brings about the third step in the free choice motivation—triggering action based on the will to do, which follows personalization.

Psychologists tell us that converting the will to do (good attitudes) into actual action is a hard thing to pinpoint. What it takes to convert a passive agreement that off-duty safety is a good thing into doing something about it takes place only

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"This group is now in the process of training our 1,096 public utilities employees in the mouth-to-mouth method of artificial respiration." "Had it not been for this Breathe Life Trainer, I do not believe we would ever have been able to get our employees to accept and practice this method of resuscitation."

Safety Director, Public Utility

"It is my opinion that the Breathe Life Trainer is a very effective method of training in mouth-to-mouth resuscitation."

Director of Safety, Utility

"After examining the available training aids, including some very good films, we find that BLT is the only training aid that actually simulates the conditions encountered in an emergency situation."

Safety Representative, Pipe Line Company

"We had previously experimented with other forms of training but the Breathe Life Trainer is in a class by itself." "The Breathe Life Trainer simulates actual conditions more than any other method I know of at present."

Director of Safety, Construction Company

"We find that the Breathe Life Trainer gives you the closest type of training to real-life training that we have seen on the market today."

Chief, Fire Department

"It is definitely my personal opinion that your Breathe Life Trainer is of great value in the teaching of mouth-to-mouth resuscitation." "In the teaching of mouth-to-mouth resuscitation your Breathe Life Trainer is the only device I know of that approaches satisfactory duplication of actual experience."

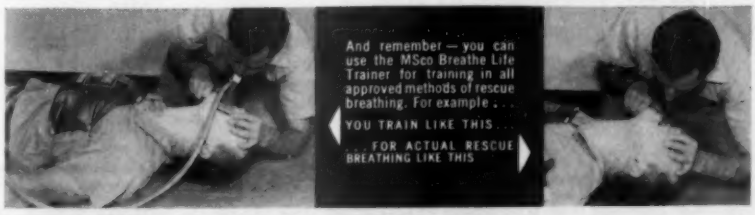
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"After almost six months' usage of your company's Breathe Life Trainer . . . in my opinion and in that of our first aid instructors, your trainer offers the best means for practicing mouth-to-mouth resuscitation without actual mouth-to-mouth contact."

Sr. Safety Representative, Utility

"Just a line to let you know that our rescue breathing program is now in full swing. It sure has made the job lots easier and simpler with your Breathe Life Trainer."

Safety Director, Electric Utility



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after personalizing for the individual. One thing is certain: it seldom, if ever, takes place without having experienced the first two steps of the free-choice process.

Participation in activities and discussions is the trigger. Usually a particular item is the turning point. This may be an actual accident involving a fellow employee and friend or even a scene in a motion picture that ties in with a familiar home hazard. Suddenly, what has been merely agreed with demands doing. That's when actual use of what has been learned takes place.

No one changes his attitude into action unless it fills a personal need, sent home by actually experiencing the thing himself. The experience may be physical, mental, emotional, or all three combined.

Finally, there is the fourth step of maintaining the will to do. Since attitudes are kept only as long as they give satisfaction, an off-duty program must provide for maintenance.

Be sure to have employees participate in the development of the program, wherever possible. Get their ideas, suggestions, and reactions, for free-choice groups must feel it's "their baby."

Understanding the Women. We can't neglect the impact of feminine psychology, thinking, and desires. Off the job it's truly a woman's world, for so much they do centers around family and group activities. Here are a few points to remember:

1. Women tend to personalize everything. Safety must relate to them favorably.
2. Women should never be criticized directly. The negative won't work. You must accentuate the positive.
3. Women are never wrong, so don't expect any open admissions of error.
4. Women verbalize—talk, talk, talk—to release their tensions and aren't always listening. Their attention is not sustained, calling for more retakes.
5. Women like to parade. They are apt to ask questions, even when they understand, to draw attention to themselves.
6. Women excel in routine and detail. Once they get the right emotional attitude toward safety, fixing the right habits and learning safe procedures are natural for them.

However, if women didn't live by their emotions and didn't believe the world rotated around them, the human race wouldn't last long. If each mother did not believe her child to be perfect and untouchable and those things that are hers the best, there'd be little chance of the young surviving. Let's make off-duty safety the women's—something they'll fight for.

Men are tuned to the social responsibility, the broad aspects, the greatest good for the greatest number. They are the ones who should get the social appeal in addition to personal interest items.

Let me again emphasize the need for avoiding any semblance of paternalism. The only "E" of safety we can rely on is education. Enforcement and engineering will come only if people want them and can be inspired to want them.

We can't seem to command. We must instill leadership in each individual. They must take the responsibility and provide the initiative.

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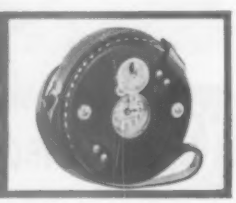
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WIRE FROM WASHINGTON

By HARRY N. ROSENFIELD

Washington Counsel, National Safety Council

This report is an information service. Publication does not imply National Safety Council approval of or opposition to any legislation mentioned

THE 86TH CONGRESS adjourned, after having taken some 50,000 pages of the *Congressional Record* to consider more than 20,000 bills introduced in its two sessions. Many safety measures were enacted.

Others still awaited final approval, when the second session of the 86th Congress adjourned. On adjournment of a Congress, all bills die. New bills must be introduced in the 87th Congress, which convenes in January 1961.

Industrial Safety. The Congress approved and sent to the President S. 1964, amending the present law requiring accident reports to be submitted by railroads to the Interstate Commerce Commission. (See "Wire," August 1960).

Approved by government, the railroads, and railway labor, the bill requires reporting of accidents arising in the conduct of a railroad as a business enterprise but which do not occur in the course of transportation as such.

Another bill did not obtain final Congressional approval, although it had been passed by the Senate and favorably reported by the House Committee on Education and Labor. S. 743, which would have made the Federal Coal Mine Safety Act applicable under specified conditions to mines employing 14 or fewer persons, failed to receive House consideration before adjournment. (See "Wire," June and August 1960.)

The National Conference of Commissioners on Uniform State Laws, in annual meeting, tackled the problem of devising a uniform or model state law to establish liability in cases of radiation injury.

Congressman Melvin Price (Ill.), chairman of the special radiation subcommittee of the Joint (Congressional) Committee on Atomic Energy, stated that effective state laws are needed to protect workers and others from atomic radiation hazards.

The AEC proposed an amendment to its rules governing standards for protection against radiation. The proposal would establish design and packing criteria for containers used for disposal of waste radioactive materials in the ocean.

The amendment prescribes, among other things, an assurance that the containers would sink to a depth of at least 6,000 ft. and prevent escape of enclosed materials.

The surgeon general of the U. S. Public Health Service warned the nation has a serious shortage of radiation safety experts. By 1970 he foresaw the need for at least 4,000 additional physicians, engineers, and physicists with extensive training in radiological health and protection.

Nearly half of these, he said, would be employed by industry. At present training rates, only one-third of the necessary number is being trained and educated.

The AEC announced reductions in permissible radiation exposure of workers in atomic-industry plants as well as for the general public that might be exposed to radioactive materials released from such plants.

The new limits, effective January 1, 1961, are one-third those allowed by current regulations. Specifically, they limit exposure to an average of five roentgens a year and to not more than three roentgens in any single quarter year.

The exposure for the general public is geared to 10 per cent of the limits established for radiation workers. According to the AEC, the new regulations bring its standards into accord with the recommenda-

—To page 174

THE MONTH IN WASHINGTON

- **Congress sends bill to President requiring railroads to report non-transportation accidents.**
- **National Conference of Commissioners on Uniform State Laws meets to devise uniform or model state law establishing liability in cases of radiation injury.**
- **Atomic Energy Commission announces reduction by two-thirds of permissible radiation exposure of workers in atomic-industry plants and for the public exposed to radioactive materials released from such plants.**
- **Federal Aviation Administration studies how close parallel runways can be operated at major airports for safe, simultaneous, independent instrument flight operations.**
- **The International Union of Marine Insurance and the American Bar Association Committee on Marine and Inland Marine Insurance Law investigate hazards and liability associated with nuclear shipping.**

ARAMCO Issues Two-Language Poster Kit

This past summer the Arabian American Oil Company, through D. J. Sullivan in the Office of the General Manager (Operations), Dhahran, Saudi Arabia, issued a safety poster kit with materials in two languages—English, Arabic.

Enclosed in a handy pocket folder, on the front and back of which were printed target illustrations, the posters were explained in a covering letter—(below) in two languages. Mr. Sullivan said:

"To All Supervisors: With this *Target* we are bringing to your attention information on home safety, motor vehicle accident prevention, first aid, and industrial safety. Our safety effort must be in all these areas if we are to truly make safety our way of life.

"I urge you to continue your daily inspections of all your work places so that our housekeeping and equipment safety may be kept at a high level. Continue your daily safety meetings and give special emphasis to home safety each week end. Solicit suggestions for improvement of your safety effort from your fellow employees."



OFF THE JOB



Planning safety programs for your plant and community

By HARRY C. JOHNSON

NSC Staff Representative, OTJ Safety Committee



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Anyone can operate the Lif-O-Gen unit. Press the nozzle on inhale, release on exhale. There's enough U.S.P. oxygen in the container to last through almost any emergency. A plastic face mask and tube are included, but the unit will also work directly through the nose or mouth.

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ROK Army Adopts U.S. Safety Methods



Thomas H. Wilkenson, director of safety, Department of the Army, is honored by the Republic of Korea Army in Seoul for establishing the ROK Army safety program.

CRITERIA for judging the effectiveness of a safety program generally are related to accident frequency and severity rates, or to injuries, deaths, and dollar loss per capita.

In addition, another measure used by the U. S. Army in its accident prevention efforts is the number of foreign nations whose representatives ask how the army goes about achieving its marked reduction in accident experience.

One of the nations which not only made inquiry, but also adapted the U. S. Army safety program for its military forces, is the Republic of Korea.

The established ROK Army safety program has resulted in fewer deaths and injuries to ROK Army personnel, in greater safety for the citizens of Korea and for American troops and civilians stationed in Korea, and in less damage to equipment and material supplied by the American taxpayer.

Human and monetary savings, combined with improved foreign relations, are dividends produced by this young accident prevention activity.

On request of the chief of staff of the Republic of Korea Army and the chief of the Military Assistance Advisory Group, funds were made available to bring two English-speaking ROK Army officers to the United States for specialized safety training.

In the fall of 1959, Col. Man Ho Lee and Lt. Col. Chong Kwone Kang came to the United States for 10 weeks of observation and on-the-job training under auspices of the Military Assistance Program.

During the period Col. Lee and Lt. Col. Kang were in this country, they attended one three-week course at the Traffic Institute, Northwestern University, Evanston, Ill., and another three weeks of instruction at the Center for Safety Education, New York University, New York City.

These were the regularly scheduled courses conducted under contract for Department of the Army safety personnel. In addition to these six weeks of formal instruction, Col. Lee and Lt. Col. Kang visited several major installations in the First and Second Army areas to observe safety program activities.

The final phase of their training involved discussions of army safety program organization and administration with safety directors of the technical services.

Gen. George H. Decker, vice-chief of staff, U. S. Army—serving from July 1957 to July 1959 as commander-in-chief, United Nations Command; chief of U. S. Forces in Korea; and commanding general, Eighth U. S. Army—is largely credited with creating interest and desire among ROK Army personnel for taking positive steps in initiating a planned accident prevention effort in the ROK Army.

T. H. Wilkenson, director of safety for the U. S. Army and recently returned from a visit to the U. S. Army, Pacific area, reported that Col. Lee has been designated safety director for the ROK Army and that Lt. Col. Kang is assisting him in his duties. These men have begun to apply many techniques learned during their safety training in this country.

Mr. Wilkenson was formerly director of safety for the U. S. Army forces in the Far East. While in Korea he was honored for supporting development of the ROK Army safety program.

Organized accident prevention, as understood and practiced in the United States, was relatively unknown in Korea until introduced by American forces during and after the Korean war. However, the ROK Army safety program is taking effective strides in saving money and manpower for the Korean military establishment.

HOOD

Flexiprene*

Neoprene gloves so flexible you can play the piano



Neoprene gloves for protecting workers against chemicals, oils, greases and abrasion used to be awkward—stiff and bulky. Then Hood research men went to work on the problem. They developed a new way to coat soft cotton jersey with neoprene rubber. The result: "Flexiprene" gloves—the most flexible neoprene work gloves ever made—so flexible you can even wear them while playing a piano.

Even though the Flexiprene glove feels lighter and is more flexible, it gives as much protection against chemicals, oils, greases and abrasion as the old "heavyweight" neoprene gloves. Hood's Flexiprene comes in the regular knit wrist style (F-400), and in 12″ (F-401) and 14″ (F-402) gauntlet styles.

Improvements like those made in the Hood Flexiprene glove can be found in other industrial gloves of the Hood line, which includes latex gloves, and gloves coated with neoprene, rubber or Koroseal. Remember, in gloves the name Hood is a *sure* sign they're good. For more information, call your Hood distributor or contact *Hood Industrial Gloves, Dept. N, Watertown 72, Massachusetts.*

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HOOD *industrial gloves*

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For All Makes of HARD HATS & CAPS

Our latest design of winter liners for cold weather. Specially designed to fit close to head and low on neck to extend below jacket collar. Furnished in two sizes—Large, 7¼ to 7¾—Small, 6¾ to 7¼. Outside material of grey army twill and lined with grey flannelette. Bound in grey bias tape. Chin strap and suspension straps of grey cotton webbing. Chin strap readily adjustable with snap-on slide. All hardware nickel plated.



TWO NEW GENCO WINTER LINERS

Heavy Duty Insulated Type
Fits All Makes of Hats



Shown at Left—No. 3001

The new type Heavy Duty Insulated Winter Liner for extreme cold weather. Fits all manufacturer's hard hats and is very easy to install. Heavy duty chin straps and tabs, also nickel plated hardware. Fits extra low on the neck.

Shown at Right—No. 4001

This Insulated Heavy Duty Winter Liner also fits all manufacturer's hats. Made with heavy zipper detachable neck and ear flaps, yet has chin strap on the top to keep on head when ear flaps are not used. Try a few of the above models this year . . . very attractively priced.



THE BEST GENCO LINES COST NO MORE!

ATTENTION, LINEMAN!



These Genco Winter Liners are made especially for use by operators working around high voltage. They are made on the same design and of the same materials as those shown at the top of page except—there is NO METAL ANYWHERE ON THEM. Genco Lineman Winter Liners have heavy gauge poly tape WHICH WILL NOT BREAK OR TEAR —even under stress. The top tape liner is attached with plastic buttons and the bottom strap is adjustable with plastic buttons.



CHIN STRAPS: Genco Genuine Leather Chin Straps for all hats or caps at a new low price. Phone or wire for our prices.

JOBBERS: Our prices are the best that can be found anywhere.

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The Asbestos Gloves with new
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When You Buy GENCO



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NEW

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Diary of a Safety Engineer

—From page 8

asked us why, and we told him we didn't know, though we hoped it was because nothing was wrong. Then he asked to talk to you." Logan subsided on the yellow sofa, and I turned to Starr. He was staring at me, and neither of us said anything. Finally he said, "Well, what about it?"

"If you mean, why didn't we show any pictures of the Starforth plant," I said, "you must remember that there are 26 different enterprises on the project, and we had only a 15 minute film. In any case, we weren't trying to present a survey of all the plants, but only a sample of fairly representative violations of safe practices. Actually, the film we showed had only about ten sequences and these were all taken in six plants."

Starr snapped out another question. "Did you take any scenes in our plant—scenes you edited out in making the final film?"

"Yes, sir, we did. They didn't come out well."

"Do they show any such faults as the films you did show?"

I looked over at Logan and his colleagues. They were unhappy, but they weren't flashing any high-signs asking me to lie for them. "The faults shown were different," I said. He prodded me, and I described them in some detail: some skylarking on the main loading dock; a shot spoiled because the afternoon sun reflected off a white brick wall and fogged the pictures; a jerry-rigged electrical installation set up to keep a machine running after a circuit had failed; and an unappetizing shot in the lunchroom kitchen which had been almost immediately halted when a suspicious cook yanked Lee's arm and threatened him with grievous bodily harm if he didn't get his blank-blank camera out of there.

Starr snapped again. "Then the Starforth plant is a mess, is it?"

I replied in all honesty that it was not. "I could have gotten shots as bad as those in most of the plants on the project. The faults would have been different, but they would not have been less serious."

Starr waved his arm, forgetting the highball in his hand. Three



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Wyandotte Chemicals Corporation, Wyandotte, Michigan. Also Los Nietos, California; and Atlanta, Georgia. Offices in principal cities.

highly-paid executives leaped forward with identical handkerchiefs to mop a spot of whiskey off Starr's knee. He waited till they finished and then, without acknowledging their service, he said to me, "I don't settle for a performance level which is average. There are some very badly run concerns which have plants on your project, and my people are not expected to descend to their level. Bad financing, bad production techniques, bad personnel work—management is a unity, Mister Safety Man, and its normal tendency is to deteriorate.

"I started out as a laborer for a contractor who was one of those old-fashioned artisans you hear about—a man with a love of a good job well done. By the time I was a foreman, his son took over the business and broke it in the depression of 1921. I went to work as a laborer in a textile mill in New Jersey. By the time I was a department superintendent, the founder married his third wife and went off to Paris for a six months' honeymoon. The executive vice-president broke that concern in 1928, without even waiting for the depression. In 1937 I was vice-president of an automotive parts manufacturing firm when the owner's son came home from Harvard Business School with ideas — pettifogging, stupid, little ideas. I asked the owner to fire him, and when he wouldn't, I organized a syndicate and bought the concern. That was how Starforth got started, and I did what I did because I was doubly damned if I was going to let a third business get shot out from under me.

"I know nothing about accident prevention—nothing that any old-school foreman hasn't learned from living with industrial operations. I don't propose to start learning about safety now. You tell men here how to stop the kind of faults you report. They'll stop them—or else. I'm not saying this out of any sentimental yearning to save the lives of stupid people. I'm not saying it because accident costs might eat me out of my dividends—they won't. I'm saying it because I think every fault in management is a cancer that eats away efficiency and productivity. I believe in surgical operations as soon as such cancers are shown to exist."

I said nothing at all, but the trio on the yellow sofa said "You're right, Mr. Starr."

So I have a date to show my clippings of Starforth films to the top staff group at Starforth tomorrow. I admit I was both disappointed and relieved to learn that Mr. Starr would not be in the audience.

When I got home tonight, Sue was waiting beside the coffee pot. "How did they like the film?" she asked. "Not very well," I replied.

"That's too bad," she said. "Lee had such high hopes for it and worked so hard."

I said, "That film gave us one of the finest openings I could have asked for to do a constructive safety job." Then I told her about Starr.

When I finished, she said, "That's wonderful. But what was it in the film that convinced him?"

"Honey," I replied, "he didn't even see the film."

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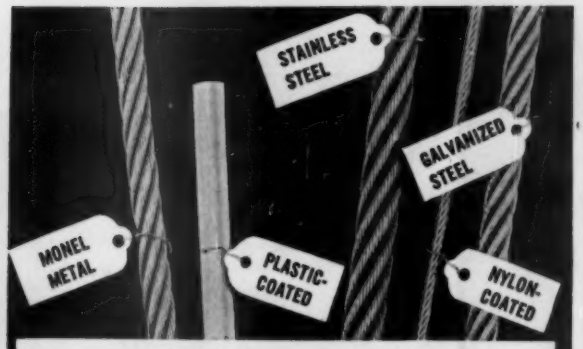
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Macwhyte Atlas Slings are braided to provide a perfectly balanced sling—extra flexible, lightweight, kink-resistant, load hugging, easily handled. Available in a wide variety of types, sizes, and fittings. Ask for Sling Bulletin 5308R. Macwhyte Wire Rope Company, 2900 Fourteenth Avenue, Kenosha, Wisconsin, U.S.A.

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Here are 5 Corrosion-Resisting Wire Ropes

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"Safe-Lock" wire rope assemblies are made in a wide range of sizes and types for machine parts, controls, and operating devices. They are fabricated to the exact size and length you need, with fittings on one or both ends — ready to use for safe, easy, quick, low-cost installation. Ask for catalog 5601. Macwhyte Wire Rope Company, 2900 Fourteenth Avenue, Kenosha, Wisconsin, U.S.A.

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MACWHYTE Wire Rope COMPANY

MACWHYTE MONEL METAL WIRE ROPE RESISTS CORROSION



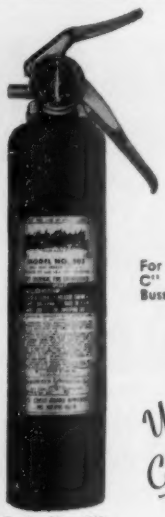
Macwhyte Monel Metal wire rope is a preformed wire rope of a high-nickel-content alloy steel. Monel Metal is more resistant to corrosive substances than any other commercial metal. Monel Metal wire rope will resist pickling solutions, salt water, fruit juices, food acids, soaps, and alkaline substances. It also resists such acids as sulfuric, hydrochloric, and hydrofluoric. It is ideal for use on hoists, conveyors, and controls exposed to highly corrosive conditions.

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PRESSURIZED TYPE
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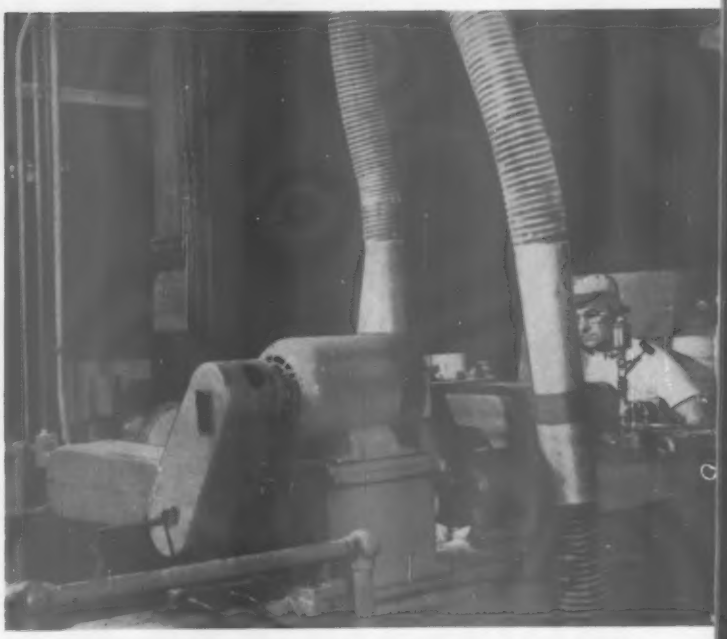
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these ducts take plenty of grit



Dust collector on machine used to finish grinding wheels to correct size after firing. Flexible piping allows for machine travel. (Du Pont photo)

Neoprene Ducts Resist Abrasion

IN A PLANT manufacturing commercial abrasives, the ductwork in the dust-collection system takes a lot of severe punishment. The dust created during manufacturing operations is composed of extremely sharp, hard particles.

The Norton Company, of Worcester, Mass., has been manufacturing abrasives since F. B. Norton's emery wheel was patented in 1877. Dust removal has been one of the operating problems, and many tons of sheet metal ducts have been eroded away since the company began business.

Many ingenious attempts were made to solve this maintenance problem. Air velocities were modified, replaceable elbows were installed, pipes were rotated to equalize wear, and various protective coatings were applied. But still the ducts wore through in an uneconomically short time.

About six years ago, spiral wire-inserted neoprene hose was tried. It worked so well that its use was extended throughout the plant as replacements became necessary.

In dust collectors carrying abrasive particles at 3500 fpm and higher, neoprene elbows were found to have 12 times the life of galvanized iron or 16-gauge steel tubing. In addition to internal abrasion resistance, the flexible tubing also showed high resistance to external attack by oils, heat, and aging.

William J. Samborski, Norton maintenance engineer, has found four important advantages in the neoprene construction: easy installation, self gasketing, long wear, and flexibility for use with moving equipment.



Servicing a Boeing 707, American Airlines' mechanics wear suits of neoprene coated cotton, currently supplied by Sawyer-Tower, Inc., Watertown, Mass. Starting with 1000 of these weather-resistant suits 5 years ago, American has been adding an additional 400 a year to meet the needs of their growing airlines service.

NEW NEOPRENE COATED OUTER WEAR KEEPS WORKERS ON THE JOB IN ANY WEATHER

Rainwear for American Airlines' outdoor personnel relies on a coating of waterproof, weather-resistant neoprene synthetic rubber to give dependable protection in the foulest weather.

Not only does the neoprene coated fabric keep workers snug and dry—operating with fair weather efficiency regardless of the elements—it also assures long wear by protecting fabric and seams against abrasion, tearing, oil and grease, fuels and chemicals. In addition, neoprene stays flexible at low temperatures, affords maximum safety because of its excellent flame-resistance.

Of all synthetic rubbers, only neoprene has the thoroughly proved, *balanced* combination of properties needed for lasting protection under the toughest conditions. That's why you'll so often find it on the job . . . in everything from safety shoes and gloves to pressurized space suits and protective clothing.

To learn how neoprene products can solve *your* safety problem, see your local rubber goods supplier. Or write: E. I. du Pont de Nemours & Co. (Inc.), Elastomer Chemicals Dept. NSN-10, Wilmington 98, Delaware.

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THE ACCIDENT BAROMETER



Prepared by the Statistics Division
National Safety Council

ACCIDENTAL DEATHS in June totalled approximately 7,900—no change from June 1959. Increases in motor-vehicle and public non-motor-vehicle accident fatalities were offset by decreases in work and home deaths.

The six-month death total was 44,400, or 1 per cent above 44,000 last year. Aside from an increase in deaths from home accidents, other classes showed no change from 1959.

Motor-Vehicle Deaths

About 3,320 deaths resulted from motor-vehicle accidents in June, or 2 per cent more than a year ago.

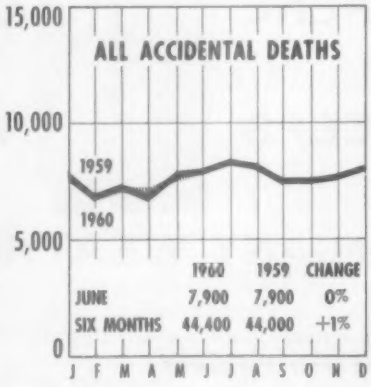
Deaths during the six months totalled 17,090, about the same number that occurred last year. The six-month death rate per 100,000,000 vehicle miles was 5.0, a decrease of 2 per cent from 5.1 in 1959.

Of the 49 states reporting for six months, 27 had fewer deaths than last year, 1 had the same number, and 21 had more deaths. States with the greatest improvement for the first half of the year were: New Hampshire, —31 per cent; Rhode Island, —30 per cent; and West Virginia, —25 per cent.

Reporting cities with populations of more than 10,000 had an increase of 11 per cent for June and 5 per cent for the six-month period. Cities with more than 200,000 population having the largest reduction in deaths for the first half of the year were: Omaha, Neb., —65 per cent; Grand Rapids, Mich., —56 per cent; and Worcester, Mass., —50 per cent.

Work Accidents

Deaths from work accidents totalled 1,100, or 4 per cent below June last year. The six-month death total was 6,700—no change from 1959.



The June frequency rate per 1,000,000 man-hours in 21 sectional accident prevention contests conducted by the National Safety Council was 6.14—4 per cent below last year. The six-month rate also went down 4 per cent to 6.09.

Public Deaths

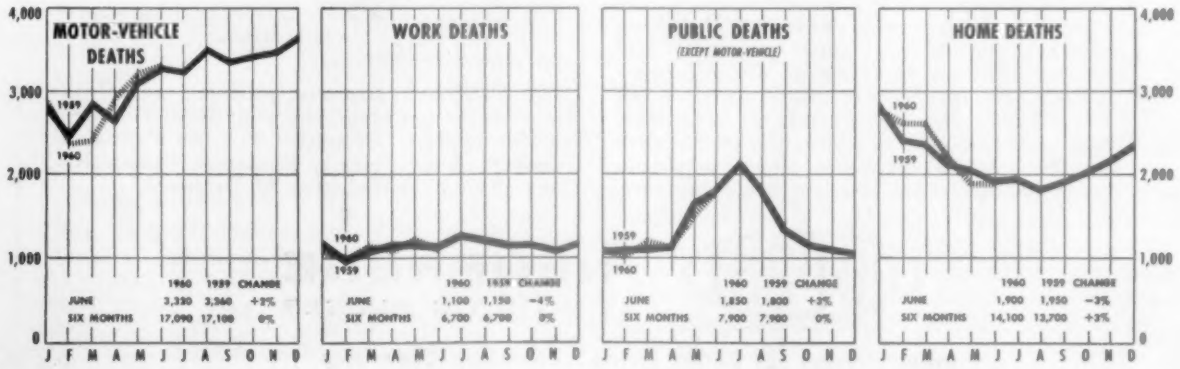
Public non-motor-vehicle deaths in June totalled 1,850, or 3 per cent more than a year ago.

The six-month death total was 7,900, about the same number as in 1959. There were sizable increases in firearms fatalities and other specified public accident deaths and small decreases in the remaining types. Increases in deaths of children 5 to 14 and persons 15 to 24 and 45 to 64 years old were offset by decreases in deaths of children under 5 and persons 25 to 44 and 65 years and over.

Home Deaths

Deaths from home accidents numbered about 1,900, a decrease of 3 per cent from June last year.

The six-month death total was 14,100, an increase of 3 per cent from 13,700 in 1959. Most of the increase occurred in deaths from firearms accidents, but deaths from poisons, fires and burns, and falls also were up. There were fewer deaths from mechanical suffocation and poison gases. Increases were reported for persons 25 years and over, a decrease for young people 15 to 24 years old, and no change for children under 15 years of age.



KEEPING POSTED!



Watch this space each month for late news on NSC services. Use the handy Order Form to request sample copies of publications listed in this issue or to order safety merchandise.

OCTOBER 1960





HELP YOUR SAFETY MEN DO A BETTER JOB. ENROLL THEM FOR COURSES IN THE 1961 SESSION OF THE NATIONAL SAFETY COUNCIL'S SAFETY TRAINING INSTITUTE

Each year the National Safety Council helps make safety men out of beginners and better safety men out of veterans through the Safety Training Institute. The STI consists of a series of one-week courses on accident prevention ranging from basic principles to specialized aspects. It is the only school of its kind.

Four courses are offered at the Institute—*Fundamentals of Industrial Safety*, *Safety Management Techniques*, *Industrial Hygiene for Safety Engineers* and *Radiation Safety*. Whether you have new men on your safety staff or seasoned professionals, enrollment in the Safety Training Institute will help make them better safety men. Send for free brochure that describes the courses, school dates, enrollment procedures and costs.

NEW FALL-WINTER SERIES OF POSTERS AND LEAFLETS FOR "EVERYWHERE . . . ALL THE TIME" CAMPAIGN

Since the *Safety Everywhere . . . all the time* campaign was announced by NSC in March 1960, hundreds of firms have gotten this dynamic campaign underway. Six new posters and six new leaflets have been recently issued by NSC to maintain the continuity of the campaign. This new material covers the following subjects: Hand tools, driving and walking, fire prevention, handling materials, machine tools and Christmas-New Year holidays. Firms using the campaign will want to add this new material and those that have not taken advantage of this new concept in safety programing can do so now. Send for free descriptive literature containing information and prices on all "*Safety Everywhere . . . all the time* campaign materials including the new items mentioned here.





SAFETY FOR THE HOLIDAYS GETS A BIG BOOST IN NEW 4-PAGE LEAFLET

A colorful four-page leaflet, die-cut into the shape of a Christmas package is titled "*Open before Christmas.*" Its contents are intended to serve as a reminder that the holiday season can become a time of tragedy for families when loved ones are involved in traffic accidents. Size—6″x3″. Ideal for pay envelopes, mailings and handouts.

399.43 *Open before Christmas* leaflet (sold in pkgs. of 100), price per package: 1—$2.40; 10—$1.55; 50—$1.20; 100—$1.10; 200—$1.00; 1,000—$ .97; 2,000—$ .95.

USE HANDY ORDER FORM ON FOLD-OUT PAGE TO OBTAIN FREE BROCHURES OR ORDER ITEMS.

New POSTERS

Colorful safety posters give *visual impact* to your safety program. Eye-catching art-work and short, to-the-point captions, give these safety messages repeated readership. Seen and read dozens of times by each employee, they hammer home the importance of safety on the job. Poster subjects are related to actual accident experience. They point-up accident causes, means of prevention and general safety rules to be followed. These National Safety Council posters have proven highly efficient and effective in accident prevention programs.

POSTER PRICES*

SAFETY POSTERS, except traffic

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Suffix "A"	.....	.....	$.12	$.07	$.06	$.05
Suffix "B"	.....	.....	.23	.195	.155	.12

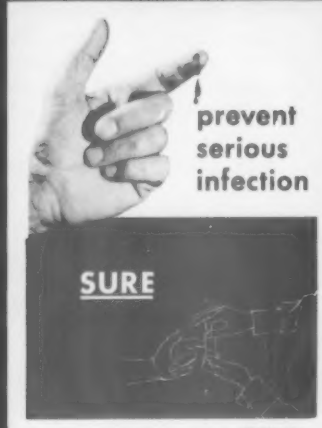
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*National Safety Council Members receive 10% discount on these prices. Quantity prices apply only on a single shipment to one location. Please enclose check or cash with orders less than $3.00. Prices subject to change without notice.



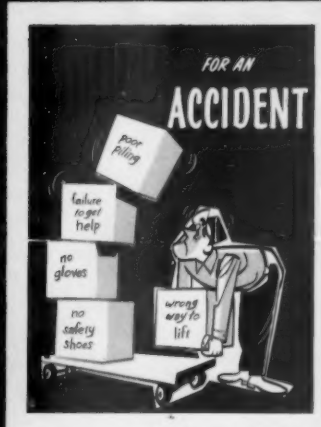
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V-1997-A 8½"x11½"



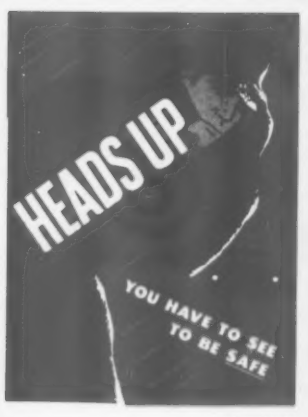
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©NATIONAL SAFETY COUNCIL

T-2017-B 17"x23"



PROPERLY USED AND SECURELY TIGHTENED *ROOF BOLTS ARE SAFE*

©NATIONAL SAFETY COUNCIL

1815-A 8½"x11½"



EFFICIENT PUBLIC TRANSPORTATION *Demands*

©NATIONAL SAFETY COUNCIL

V-1996-B 17"x23"

DON'T LET AN ACCIDENT RUIN YOUR



©NATIONAL SAFETY COUNCIL

T-2016-A 8½"x11½"
T-2015-C 25"x38"

SEND FOR FREE SAMPLE COPIES OF EMPLOYEE TRAINING

BOOKLETS

Employee education booklets are a basic part of your safety program. The National Safety Council publishes a wide variety of such booklets designed to shape sound safety attitudes or instruct your employees in the safe practices related to their work or off-the-job activities. Several recent booklets are described below. Sample copies of these booklets may be obtained by circling the code number on the order form or they can be ordered in quantity for prices shown.

OPEN BEFORE CHRISTMAS

A colorfully printed four-page leaflet in bright holiday colors die-cut into the shape of a gay Christmas package. Its contents are intended to serve as a reminder that the holiday season can become a time of tragedy for families when loved ones are involved in traffic accidents. Size: 6" x 3".

STOCK NO. 399.43—(sold in packages of 100) Cost per package: 1—$2.40; 10—$1.55; 50—$1.20; 100—$1.10; 200—$1.00; 1,000—$0.97; 2,000—$0.95.

BE A WINTER WINNER

A new 16-page booklet, printed in attractive two colors, discusses winter driving hazards. Explains how to drive safely in spite of such hazards as determined in the most recent tests conducted by the National Safety Council's Committee on Winter Driving Hazards.

STOCK NO. 399.59—Cost per booklet: 50—$.065; 500—$.055; 1,000—$.050; 5,000—$.040; 10,000—$.037; 20,000—$.035.

KEEP ROLLING WITH SAFETY IN WINTER WEATHER

Special edition of the winter driving hazards booklet for tractor-trailer and other commercial vehicle drivers, discusses technical problems of the professional driver of heavy equipment. Many charts and schematic drawings. Sixteen pages, 5½" x 8½", two color.

STOCK NO. 399.58—Cost per booklet: 10—$.17; 50—$.10; 500—$.085; 1,000—$.075; 5,000—$.065; 10,000—$.06.

WHERE DO YOUR KIDS PLAY

A booklet intended to stimulate parent's thinking about the play environment and habits of their school-age children. Each page shows actual photographs of children playing in typical but extremely risky places. The last two pages of the booklet discuss organized and supervised play areas for children. There are eight pages with two-color printing.

STOCK NO. 399.36—Cost per booklet: 50—$.06; 500—$.055; 1000—$.05; 5000—$.04; 10,000—$.037; 20,000—$.035.

ACCIDENTS IN THE OFFICE

Brightly colored and presented in an eye-appealing way, this new booklet will help alert your "white collar" staff to the common hazards found in their occupational environment. "Accidents in the Office" fills a long-felt need. Eight pages, 3¾" x 8". Two-color illustrations.

STOCK NO. 195.50—Cost per booklet: 50—$.06; 500—$.05; 1000—$.045; 5000—$.043; 10,000—$.042; 20,000—$.04.

A SIMPLE DO-IT-YOURSELF PROJECT

The safety of a worker's fingers—industry's best production tools—is the subject of this booklet. Cartoons and brief copy help remind workers of the do's and dont's of hand safety. Eight pages 3¾" x 8". Two-color illustrations.

STOCK NO. 194.22—Cost per booklet: 50—$.057; 500—$.048; 1000—$.041; 5000—$.033; 10,000—$.031; 20,000—$.029.

Use the handy Order Form to request free sample copies or to order booklets in quantity lots. For listing of additional booklets available, write—

GREEN CROSS FOR SAFETY NATIONAL SAFETY COUNCIL

NATIONAL SAFETY COUNCIL
425 N. MICHIGAN AVENUE, CHICAGO 11, ILLINOIS

USE THIS CONVENIENT ORDER FORM TO PURCHASE OR OBTAIN FREE...



ORDER FORM

NATIONAL SAFETY COUNCIL

SAFETY MATERIALS

SHIP TO:

ORGANIZATION_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

TO ATTENTION OF_____

_____

KEEPING POSTED MATERIALS

☐ **SAFETY TRAINING INSTITUTE**
Send descriptive literature, dates and enrollment information

☐ **SAFETY EVERYWHERE . . .** all the time
Send complete campaign information including new Fall-Winter poster and leaflet series prices.

No. Pkg. of 100	STOCK No.	ITEM
	399.43	OPEN BEFORE CHRISTMAS holiday leaflet

☐ **LOOK, STOP BACKING ACCIDENTS**
Send complete Campaign Information, list of materials and prices.

SAFETY POSTERS

List quantity desired

STOCK No.	QUANTITY
1686-A	
1703-A	
1707-A	
1785-A	
1794-A	
1815-A	
1853-B	
1906-A	
1923-B	
2022-A	
T-2016-A	
T-2015-C	
T-2017-B	
V-1996-B	
V-1997-A	
V-1998-A	

Sorry no sample copies of posters available

SAFETY BOOKLETS

☐ Ship booklets in quantities indicated

☐ Send free sample as circled

STOCK No.	QUANTITY
399.43	
399.59	
599.36	
195.50	
399.58	
194.22	

Circle stock number ONLY for free samples

NATIONAL SAFETY COUNCIL MEMBERS ARE ENTITLED TO A 10% MEMBERSHIP DISCOUNT

GREEN CROSS FOR SAFETY ® NATIONAL SAFETY COUNCIL

NATIONAL SAFETY COUNCIL
425 North Michigan Avenue, Chicago 11, Illinois



USE THESE

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USE THE HAND
TO OBTAIN YO



HOLD IT!

Here's an effective-six week campaign against backing accidents

FACTS ABOUT BACKING ACCIDENTS

- About 1 out of every 4 commercial vehicle accidents is a backing accident.
- While these accidents usually occur at low speeds, they have resulted in fatalities and numerous personal injuries.
- Because of their frequency, backing accidents are also costly in terms of damaged docks and vehicles.
- Backing accidents have ruined many driver safety records because they are preventable.



HESE CAMPAIGN MATERIALS TO STOP BACKING ACCIDENTS

FILM	**LOOK, STOP BACKING ACCIDENTS** **16mm Black and white sound film** Viewing time: 10 minutes. In that short span of time you can dramatize the importance of backing safety, illustrate how to avoid backing, tell what to do when faced with certain choices and spell out how to back safety in all situations. An excellent film.
BOOKLET	An 8-page booklet that illustrates the five main rules of safe backing. It contains schematic drawings to illustrate each point and brief case histories of actual backing accidents taken from the files of the National Safety Council. Printed in two colors, page size 3¾" x 8".
POSTERS	Six colorful posters that once again repeat and reinforce the ideas viewed in the movie. One large poster (17"x23") sets the campaign theme and 5 other posters (8½"x 11½") deal with the 5 basic rules of safe backing.
DASH STICKERS	Add a touch of humor to the campaign and once again illustrate the important points of safe backing. These little billboards are used in the driver's cab of the vehicle to keep him reminded of the campaign while on the road.

Now . . . you can pinpoint a vigorous campaign against the irritating and costly backing accident. The NSC backing accident campaign is designed for a six-week period and can be conducted within the framework of your regular planned fleet accident prevention program. It focuses attention and interest on this single area of safety; providing the "know-how" on how to stop backing accidents. The film, *"LOOK, STOP BACKING ACCIDENTS,"* is used to spark the campaign and is then followed and supported by intensive use of the other campaign materials.

You can obtain complete information on this special interest campaign by sending for a new folder that describes all the available materials, lists prices and suggests campaign procedure.

SEND FOR YOUR FREE FOLDER NOW!

NATIONAL SAFETY COUNCIL
425 N. Michigan Avenue
Chicago 11, Illinois

HANDY ORDER FORM ON THE FOLD-IN PAGE
IN YOUR FREE FOLDER DESCRIBING THE ENTIRE CAMPAIGN

Printed in U.S.A. 64M—1060—43

Balanced Program

—*From page 120*

to others and avoid damage to their property. You may even have to protect your own people and property from them. These things add up to the total safety problem.

Since we are talking about injuries and property damage, we'll be dealing with people and things. We'll have to work with *people* whose conduct can be influenced by *safety teaching* and with *things*—plant, machinery, equipment, materials, product—which are subject to *safety engineering*. We'll examine these two broad approaches more closely, but already you can see the need for balance.

You may have the safest physical plant in the world, but unless your employees are safety-minded and constantly alert, your accident rate is going to be high. Conversely, even the most safety-conscious employees cannot be expected to avoid injuries and damage to equipment, if physical hazards constantly confront them in a poorly constructed or run-down plant.

The outline shows four prime essentials for accident prevention which deal exclusively with people. The first of these is *education*. You must educate your people to know how to do the right things at the right times in the right ways, if they are to carry out their operations without unwanted incidents.

There are two ways to reach an employee with your safety education—through his eyes and through his ears—and you should make full use of both. He learns through what he can see or read and through what he is personally told.

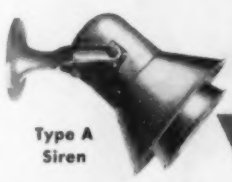
Let me emphasize right here that we're talking about the education of the hourly payroll employee. Sure, you must train the supervisor and convince him that accident prevention is his responsibility, but until you bridge the gap between the first line supervisor and the man doing the work—the man with the hammer, the man under the hard hat—you've prevented few accidents.

In reaching the employee through the spoken word, we at American Oil Company have found that by far the most effective gathering is the five-minute safety talk or "tool box lecture" held on the job site by the supervisor first thing in the morning. These sessions average about once a week for each small group.

As many as 135 have been conducted in one month at our Texas City refinery. Sometimes men in the group ask if they can't take turns, or volunteer to talk about some particular subject they consider important.

A completely personal exchange of safety advice takes place out on the job, when a supervisor notices an unsafe working procedure. He cautions the man, pointing out dangers, and suggests the correct, safe way of getting the job done. Later he makes out a "Contact Slip," which gives only the subject about which a worker was cautioned and the signature of the supervisor.

He routes it to his immediate supervisor, his department head,


Type A Siren

SOUND warning

Sound warning is advice to be heeded!


#271 Beacon Ray Light

Signals, audible or visual, are quicker in action, are universally recognized and initiate *instant response*.

The sound of a siren literally cries

Danger! Emergency!

The startling flash of the Beacon Ray,

its companion signal, provokes the same reaction visually.

FEDERAL has pioneered in visual and audible warnings, the *very best signals* available.

STOP at Booth #192 at the National Safety Show

If you fail to make it, write for Catalog #100.

FEDERAL SIGN and SIGNAL Corporation

13625 S. Western Ave., Blue Island, Ill.

and the safety supervisor. The slip does not have the name of the man cautioned; it is only a device for measuring what the supervisory group is doing in on-the-job safety teaching.

In one year a refinery employing about 550 workers and supervisors turned in more than 6,000 of these contact slips. Imagine the safety education this represents and the number of injuries and property damage that were prevented by this work-a-day approach to job safety.

In addition, the information given us on the slips—what subjects were most talked about, what things employees are being most lax about—helps us to concentrate our efforts on troublesome jobs.

These are illustrations of things an employee hears in his accident prevention education. Now let's cite a few examples of things an employee *sees*. Bulletin boards can teach one lesson at a time, if we're careful that no one poster stays up so long that people stop looking at the board.

We have boards in the bulk plant offices, at the loading racks in marketing, and in the shops and control rooms in the refineries. We probably average a bulletin board for every 15 or 20 employees, changing messages every few days.

An employee can learn through his eyes and ears, if we also make use of slides and sound films. Reading material can be distributed as pay envelope stuffers or hand-out bulletins describing an unsafe act that caused an accident or could have. We issue a piece regularly, called "Accident of the Month" and taken from actual plant cases in our own company. We word these giveaways so they have news value and command attention.

There are longer documents, such as safety guide books, safety code folders, and safe practices pamphlets. I would only say "Keep it short, keep it snappy and easy to read, and don't belabor the point." A fellow who has ever taken the same chance knows what you are talking about before you get to your sermon.

Another significant area in influencing people to work with safety is *promotion*. Certainly industry's management would be lax if it failed to recognize the possibilities of stimulating interest by using the American spirit for promoting something as important as accident prevention.

In my own company we make full use of all types of well-known safety awards. Last year we presented 611 safe driver awards in the company. At least 40 of them were for 25 or more years of safe driving. A safe driver award does not teach a man how to drive a truck, but we have found it an effective way to promote safe driving.

Practically everybody uses another device which comes under the heading of promotion—keeping and publicizing company, department, regional, plant, and division accident frequency and severity scores. They certainly do not tell how to prevent accidents, but they do promote interest in keeping them low and call attention when they are high.

Any variety or ingenuity used in presenting these tallies helps keep



Stop hearing loss before it occurs . . .

Keep NOISE below the danger level! The H. H. Scott Portable Sound Level Meter helps you measure and control noise before it causes expensive hearing losses. Extremely compact . . . weighs just over two pounds . . . can be held and operated in one hand . . . is so *easy* to operate that even non-technical personnel can learn to use it in 5 minutes.



- Flashlight-size, battery powered
- Rugged construction insures years of trouble-free service
- Meets all standards of the American Standards Association
- Winner of the Electrical Manufacturing Award for "Outstanding Achievement in Product Design."
- Designed for use with the H. H. Scott Portable Sound Analyzer and Impact Noise Meter — when detailed analysis of noise is required.

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GOODYEAR

SAFETY FIRST

WITH NEW CHEMIGUM OIL PROOF SOLES!



New handsome amber color!

CHEMIGUM HEELS are made of the same sensational oil proof material as Chemigum Soles.

The development of this *new* CHEMIGUM makes possible the assurance of new safety for men who work in factories where oil drippings and debris-cluttered floors present underfoot dangers. Here are the facts:

- In a "torture test" comparing Chemigum *Oil Proof* Soles with two competitive "oil resistant" soles used on nationally advertised brands of safety shoes, Chemigum expanded only a small fraction. Brand X swelled 2.17 times as much as Chemigum. Brand Y swelled 2.26 times as much.
- CHEMIGUM *Oil Proof* Soles have an "engineered tread" proved superior for sure-grip, non-slip walking on even the messiest factory floor. CHEMIGUM Soles have remarkable resistance to picking up steel shavings and chips.
- CHEMIGUM *Oil Proof* Soles are much lighter than other brands: CHEMIGUM has a specific gravity of 1.20 as compared with a specific gravity of 1.40-1.55 for other soling material designed for safety shoes.

Leading manufacturers of all types of safety shoes are replacing old-style soles with these remarkably safer *CHEMIGUM Oil Proof* Soles. Write: Shoe Products Division, Goodyear, Akron 16, Ohio for brand name of shoes illustrated.

Lots of good things come from

GOODYEAR

NEOLITE AND CHEMIGUM, T.M.'S—THE GOODYEAR TIRE & RUBBER COMPANY, AKRON, OHIO



Mr. NEOLITE says: "We're proud to bring you another pioneering product of GOODYEAR research."

up interest. Some companies have elaborate systems for promoting safety through individual prizes for various periods without a disabling injury.

I have an idea the type of simple promotional plan we've used with success in some refineries is just as effective. After all, a large prize only calls attention to your accident prevention program. A small reminder does the same thing.

Whenever the plant reaches 30 days without a disabling injury, every employee receives a cigar or candy bar from the supervisor. A slip of paper wrapped around it may say, "Don't take a chance,, and win a cigar—next month." At the end of 90 days, all employees gather after the lunch period for a 10-minute rally and a drawing for 8 or 10 nice "take home" prizes. . . Some people never get beyond the promotion stage; they put up "Safety First" signs and hope for the best. Some clever promotion should be part of every program, but it won't do the job alone.

Next item on our outline, *participation* by employees can give them the sense of belonging which the psychologists have been making such a fuss about. Participation here means that people will not only see and hear, but they will also *do*.

For example, you can get good housekeeping by setting everybody to keeping house. One of our refineries has a bronze plaque which says, "Clean as a Hound's Tooth." That's the way they keep their plant —and the plaque is displayed for a month at the winning units or shop.

Another refinery uses a colorful sign, placed in front of the winning unit. Both refineries create a little more excitement by distributing a week's supply of coffee to each of the men on the unit. The men never know when the committee, a "jury of their peers," is going to show up. Committee membership is rotated.

The safety score board at the entrance to the Yorktown, Va., refinery carries a safety slogan from a contest which brought them enough good employee slogans to change the board every two weeks for a year. Fire drills certainly would be listed as another participation item. Driver contests, too.

Some people may disagree that the next area of accident prevention, *protective equipment*, belongs on the people side of the scale in a balanced safety program. Although this equipment is "things," it nevertheless is for personal use and is of no value unless used properly. People have to be taught to use it.

Equipment for protection against job hazards is so universally recognized as an essential part of safety, and is available in so many designs and of such a variety of materials that we do not need to describe it or argue the case. It is the fourth area of approach to accident-free operation through people and safety teaching.

Perhaps, before we move from "people" to "things," we should look closer at problems which arise because people are, after all, people. We must remember that safety department records at anybody's plant are not merely statistics. They are living history, showing what people have done or have not done that they were supposed to do.

They tell who has been having the accidents, where and why. If we find one kind of job or operation is giving us trouble, we must study the job, decide how it should be done—find the "one best way" and teach it to people doing the work.

If we decide the difficulty lies with one particular supervisor, we probably will find it is because he



A TOTALLY NEW CONCEPT
IN FIRST AID TRAINING AIDS

The two essentials of First Aid and rescue work are technical training and calm, effective judgment. ■ You get judgment only from experience. ■ The greater a rescuer's exposure to realistic casualty conditions, the sounder his judgment...the better the chances of the victim. ■ Now — for the first time — Alderson Research Laboratories provide you the *means* for such exposure—the first truly realistic simulations of casualty conditions. ■ Alderson *"Synjuries"* — which bleed like real wounds — simulate many varieties of injuries. The Alderson *"Respertrain"* — for training and practice in mouth-to-mouth breathing—responds realistically to treatment and can be "revived" like a man. ■ Send this coupon TODAY for FREE complete catalog.



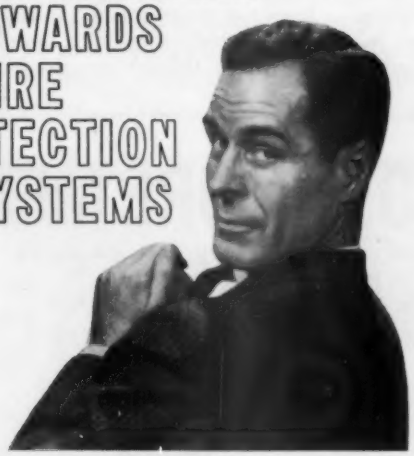
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RECOMMENDING Edwards systems for fire detection is sound judgment. Edwards is the recognized manufacturer of signaling equipment for the protection of plants, schools, hospitals, commercial buildings. No one will question your decision—before or *after* installation.

Edwards' reputation for reliability has been built through over 80 years of painstaking specialization in protective signaling. Edwards systems are simple to install—require no extensive plant alterations or work stoppages. A variety of systems provide for proper coverage of any installation. They are economical and require minimum maintenance. Most important, these systems are effective, meeting all requirements for modern, reliable plant protection.

Call your local Edwards Technical Representative at any of 56 offices throughout the U.S. and Canada, or discuss your protection needs with the Edwards' distributor in your city. They're ready to advise you and help select the best fire detection equipment. While you're at it, ask about other Edwards systems that can contribute to the safety and protection of your plant.

EDWARDS

Specialists in signaling since 1872

CONTROL • COMMUNICATION • PROTECTION

FOUR BASIC EDWARDS INDUSTRIAL FIRE DETECTION AND ALARM SYSTEMS:

1. Non-Coded Type CCVA—system sounds all alarm signals continuously when activated by either a manual station or automatic detector. "Locates" fire if annunciator is added. The annunciator would then give a visual indication at a central point as to which station or detector had been activated.

2. Coded Type SSA—system sounds coded alarm throughout plant when manual station or automatic detector is activated. Immediately indicates location of the fire to fire brigade, eliminates panic and directs evacuation through safe areas. Ideal where location of fire should be known throughout the plant.

3. Coded-Presignal Type PSSA—system sounds code of operated manual station or automatic detector at key locations only (such as safety director's office). Eliminates panic and general evacuation in event of localized fire. Leaves decision to sound alarm with authorized personnel.

4. Zoned Type AMVAD—system includes automatic detectors with manual stations spotted at strategic points. Detectors are zoned within plant and pin-point fire on central control board when activated. Operation of any station or detector sounds alarm throughout plant. Provides excellent protection 24 hours a day—even when plant is unoccupied.

All of these Edwards industrial fire alarm systems can be connected to city fire headquarters.

EDWARDS COMPANY, INC., NORWALK, CONNECTICUT • (IN CANADA: EDWARDS OF CANADA, LTD, OWEN SOUND, ONTARIO)

is not communicating his safety teaching or has not found a way to do it. He may not know what the problem is, or even that he has one, or he may not consider it important among the things he has to do. The cure for this situation depends on the diagnosis.

It is my personal belief that management can have any kind of a safety record it really wants. When top management takes an active interest in the accident prevention program, and wants results, this is known all down the line.

Of course, accidents are not prevented until supervisors and hourly employees are convinced that accident prevention is their responsibility, but it is much easier to convince them when the attitude of top management is known. We really could add a fifth element, "Pressure from top management," to the four ways already shown for approaching safety through people—education, promotion, participation, and protective equipment.

When we consider the other half of the scale, and move from "people" to "things," we definitely are in an area which is management's own problem, because the design, selection, and purchase of equipment is mainly in the province of management and design engineers.

The placing of equipment (spacing between refinery units, location of furnaces), choice of materials of construction, size and location of relief valves, barricades, guards, warning signs, even identification tags on valves—all are most important when we approach safety from the area of things and safety engineering.

After you have built your plant according to the best safety engineering standards, it won't stay that way. We must make sure the equipment is in good condition during the long periods of constant use. Is it the same unit after a "turnaround?" So our next area of approaching safety through things is periodic or continuous *inspection* to make sure that plant and equipment are in safe operating condition—now!

It is obvious that inspection will accomplish little unless you do something about things found wrong or in need of repair. This brings us to the final step you can take about "things"—*maintenance*.

The important factor here is to repair faulty equipment before you have an accident, replace it if necessary before an accident, to stop leaks, to replace trench covers and hand rails, to remove any hazards. Do something about those things you find needing attention.

There you have Amoco's idea of balanced safety. People and things—employee and company—seven areas for attacking hazards. If any one of these avenues of approach to safety is overlooked, we're not doing our best and the scale is going to tip. In the words of the National Safety Council:

"Accident prevention is like putting pressure on a coiled spring; release the pressure and you are right back where you started. Safety is the result of expert, tight administration—evenly and constantly applied"—in all seven of the areas we have explored.

WANT TO GET MORE MEN INTO SAFETY SHOES?



Iron Age

IRON AGE SAFETY SHOE
Style #681

Extra lightweight, soft brown horsehide upper, Vul-Cork Micro-cell Cushion Neoprene sole.

Tell them about Vul-Cork Soles

There are three kinds: Vul-Cork, oil-resisting Vul-Cork Neoprene, and oil-resisting Vul-Cork Micro-Cell Cushion Neoprene. One or the other covers every work shoe situation. Vul-Cork comfort, Vul-Cork wear are in every pair! They're slip-resistant for the life of the sole, never mark floors, and never let in the weather. Vul-Cork soles stay neat-looking too — no curling or fraying. You'll be amazed how many men you can get onto safe footing by recommending safety shoes with Vul-Cork soles, the original cork and rubber sole.



Vul-Cork Sole Division, Cambridge Rubber Co., Taneytown, Md.

Makers of Vul-Cork®

VUL-CORK & VUL-CORK NEOPRENE

So light, so flexible, so resilient . . . you can roll them up right in the palm of your hand

THE REAL TRUTH about Floor Care Savings:

There is no economy in buying "cheap" products!

WHAT DOES THIS MEAN TO YOU?

Take waxing. Let's suppose you are considering two waxes, Wax "A" and Hillyard SUPER HIL-BRITE®.

WAX "A" costs less per gallon, but you must strip and rewax far too often.

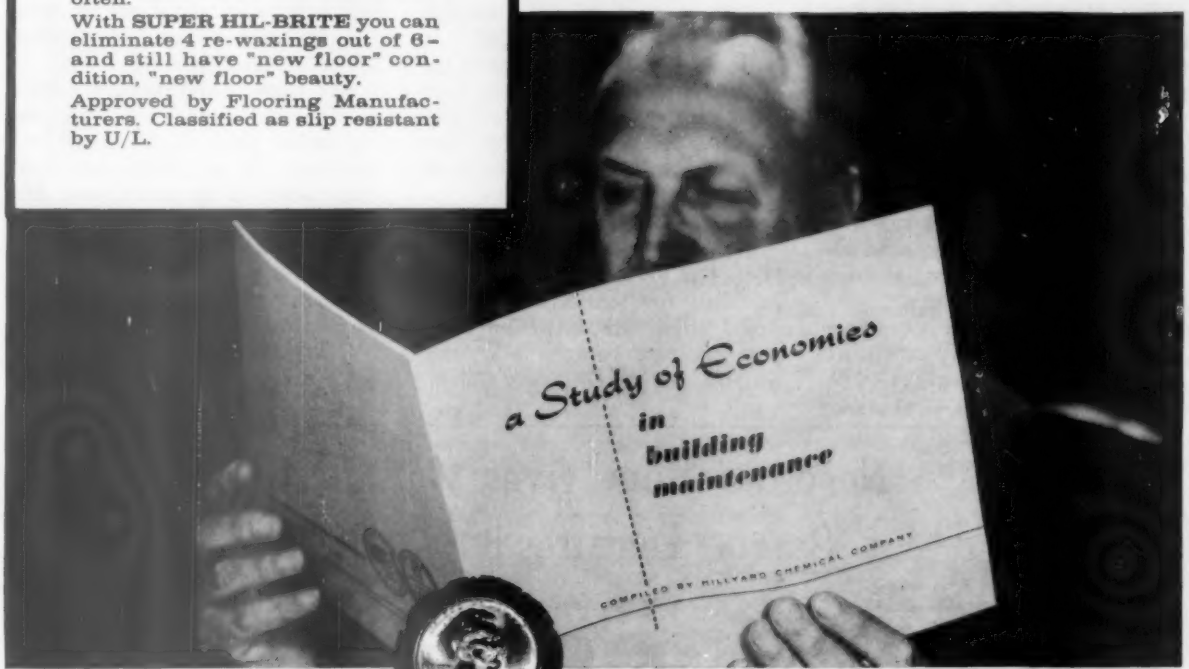
With **SUPER HIL-BRITE** you can eliminate 4 re-waxings out of 6—and still have "new floor" condition, "new floor" beauty.

Approved by Flooring Manufacturers. Classified as slip resistant by U/L.

Sure, you can save money—until you start using them!

Says the latest Building Experience Exchange Report.* "It costs 49.8¢ a year to maintain a square foot of floor space. Of this 49.8¢, only 2.3¢ goes for materials.

**National Association of Building Owners and Managers.*



A Few Pennies Now Will Save Many Dollars Later

Send Coupon Today for This Study

Here are authentic, documented case histories of floor maintenance savings. They'll help you pin-point ways to save labor and money on **your** floors.

You'll Be Money Ahead with HILLYARD

The Hillyard "Maintaineer"
is your own expert adviser, on all floor care problems,
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☐ Please send me Free copy of "A Study of Economies".

☐ Please have the Hillyard Maintaineer survey my floors to recommend ways I can get *real* maintenance economies.

NAME _____

FIRM OR INSTITUTION _____

ADDRESS _____ CITY _____ STATE _____

Wire from Washington

—From page 145

tions of the National Committee on Radiation Protection and Measurements.

The U. S. Secretary of Labor issued notice of a public hearing on a proposal to issue an order that all occupations in wrecking, demolition, and shipbreaking are particularly hazardous and forbidden for the employment of minors between 16 and 18 years old.

The order would cover all work performed at the site of the total or partial razing, demolition, or dismantling of a building, bridge, steeple, tower, chimney, or other structure, ship, or vessel.

The U. S. Department of Labor initiated a series of charts providing a direct comparison of the primary provisions of state safety codes with like provisions of American Standard Safety Codes in all major areas subject to safety regulations.

The U. S. Bureau of Mines issued a report on injury experience in the oil and gas industry for 1959. The 1959 injury rate was 9.0 per million man-hours of exposure. Injuries decreased 9 per cent in number and 7 per cent in frequency, but severity rose 7 per cent (the highest since 1956).

Operations employing 25 or fewer men represented 4 per cent of the employees, but 10 per cent of the injuries. Injuries in these smaller operations occurred about one-half as frequently as in 1958 but were 26 per cent more severe (a severity more than three times greater than the 1959 national rate).

A Bureau of Mines report on the coke industry's 1959 injury rate showed a 9 per cent increase in the over-all injury-frequency rate over 1958, representing the highest rate since 1956. The 1959 fatality rate of 0.07 recorded the lowest rate in the industry for 44 years.

Traffic Safety. Congress passed H. J. Res. 402 and sent it to the President for signature. This bill would grant approval to an interstate compact between Maryland, Virginia, and the District of Columbia for the regulation of mass transportation in metropolitan area of Washington, D. C.

The agency to be created under the compact would regulate fares and routes and would coordinate auto and bus travel. (See "Wire," July 1960).

In a review of the Congress' recent action concerning air pollution, Congressman Kenneth Roberts (Ala.) expressed regret that S. 3108, or its counterpart in the House, H. R. 10696, failed to gain Congressional approval. These bills would have extended the Federal Air Pollution Control Act. (See "Wire," August 1960).

Mr. Roberts said he plans public hearings and field studies on this legislation prior to Congress' reconvening, to be able to move for early action in the next session. He also expressed disappointment with the automobile industry's limitation of the installation of blow-by devices for 1961 to cars sold in California.

Toward the end of the session, Mr. Roberts introduced H. R.



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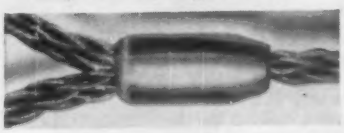
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13038 to establish federal safety standards for motor vehicle brake fluids, "to eliminate a very serious highway hazard." He stated that efforts by states to meet the dangers of substandard fluids were unavailing and that "the only way these hazardous fluids can be kept off the market is by federal legislation."

The Secretary of Commerce designated the Bureau of Public Roads, under the direction of the Federal Highway Administrator, to establish and maintain the driver register authorized by the Congress in P. L. 86-660. (See "Wire," August and September 1960.)

The register will serve as a clearing house to identify drivers whose licenses have been revoked because of driving while intoxicated or who have been convicted of a traffic violation resulting in loss of life.

The Secretary emphasized "the federal government is not entering either the driver licensing or traffic-law-enforcement fields," and the register will be operated as "a voluntary state-federal enterprise."

Preliminary forecasts indicate the register may not be in full operation until the latter part of 1961. The Bureau anticipates "the register will provide impersonal statistics of considerable value to all those working in highway safety."

An interesting proposal for meeting the nation's highway traffic jams was made by the deputy federal aviation administrator, who suggested that aircraft capable of vertical and short take-off and landing offered a flexible solution to the commutation problem.

Motor Transportation. Congress approved and sent to the President, S. 1806, an administration proposal to revise the Transportation of Explosives Act.

The bill brings under ICC jurisdiction the transportation of radioactive materials and of etiological agents and extends to private and contract carriers the penalties now applicable under law to common carriers. (See "Wire," October 1959.)

The ICC denied a petition by five railway labor unions, requesting the Commission to inaugurate a general investigation of the transportation by motor vehicle of petroleum, petroleum products, and other dangerous flammable liquids, as well as of the frequency, causes, and results of collisions between such vehicles and railroad trains.

The unions stated the principal object of such an investigation should be determination of what rules, regulations, facilities, or





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UTILITY MODEL FC-3

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Grey sanforized cotton twill, lined with napped flannel. For protecting top of head. Medium size.

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Dielectric safety cap with face shield



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Fiber glass welding helmet with lift front



Fiber glass safety cap with welding helmet

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other actions are feasible and necessary to prevent such collisions.

In its order of denial, the ICC stated it did not appear that constructive changes would result in regulations from a general investigation, and that the encouragement of uniform safety laws and regulations and uniform enforcement of such laws and regulations by the states "appears . . . to be the most effective present means for improvement of the situation."

Congressman Van Zandt (Pa.) took exception to this ruling and announced his plan to propose in the next Congress a "full-dress investigation of grade-crossing accidents and what the ICC is doing to eliminate them."

Aviation Safety The President abolished the Air Coordinating Committee, in existence since 1946, and sent a memorandum to each affected federal agency regarding interagency coordination of aviation matters. The President directed the Federal Aviation Administrator to initiate arrangements necessary to obtain needed interagency coordination.

A report of the Senate Judiciary Committee's Subcommittee on Antitrust and Monopoly on "The Insurance Industry" drew attention to what it called "the shocking fact" that loss ratio in air trip insurance (or the percentage that losses including claim expenses are of gross written premiums) is only about 25 per cent.

In computing automobile injury insurance rates, according to the report, the rating bureau uses a 55.4 per cent loss ratio. This fact, the Senate committee says, suggests "passengers are paying excessive premiums and companies are experiencing high underwriting profits."

FAA is making a study on how close parallel runways can be operated at major airports for safe, simultaneous, independent instrument flight operations. The project is designed to see what procedures can be established to make this "an accident-proof operation."

Marine Safety. Possible hazards associated with nuclear shipping received close attention at two meetings in Washington—the International Union of Marine Insurance and the American Bar Association's Committee on Marine and Inland Marine Insurance Law. The safety factors of nuclear shipping, and the liability in the event of accident, were canvassed.

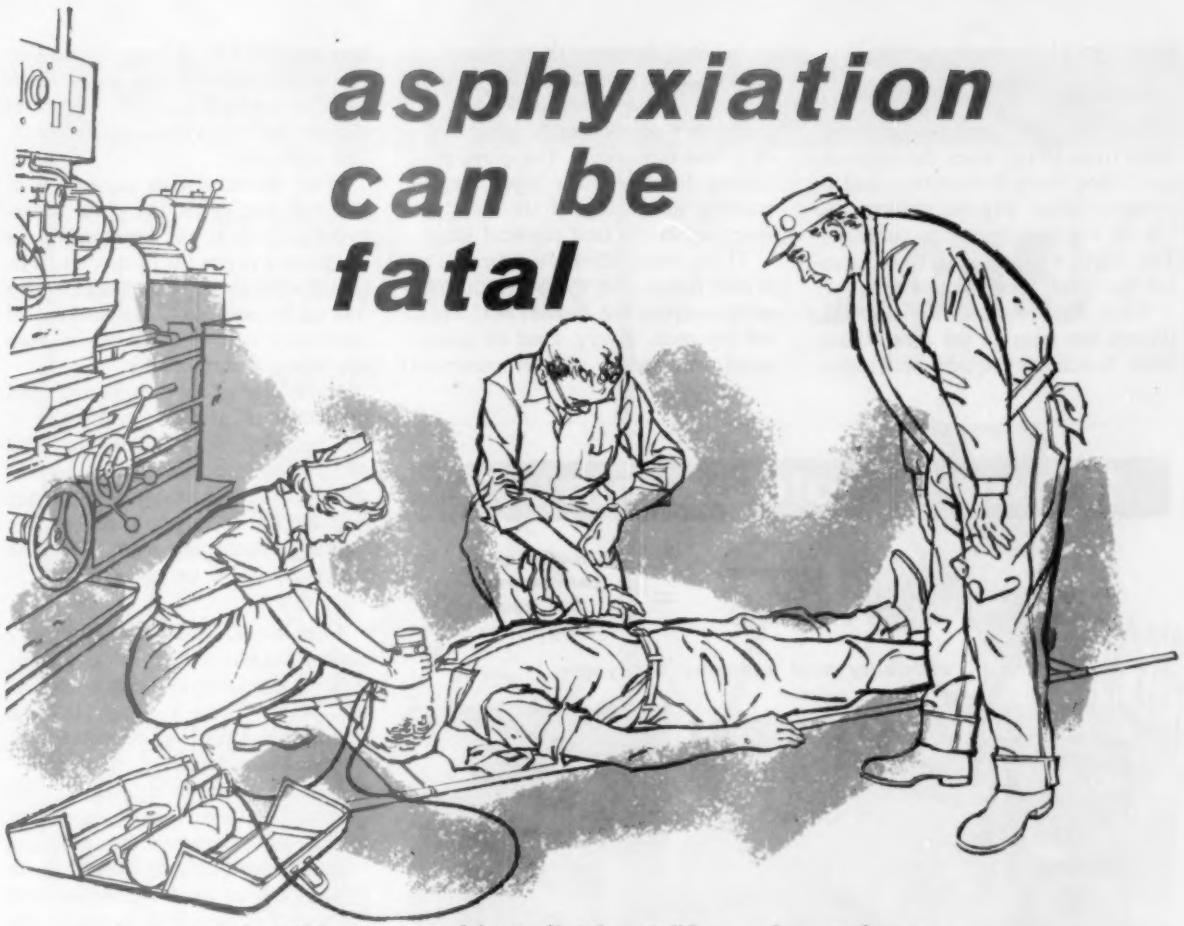
National Health Survey. The U. S. Public Health Service released a second report containing statistics on incidence of acute conditions and their associated disabilities, as disclosed in the National Health Survey conducted between July 1958 and June 1959.

The second most common group of acute conditions were injuries, which accounted for 13.4 per cent of all acute conditions. Among those whose major activity was "usually working," injuries represented 22.7 per cent of all acute conditions.

Injuries caused 30.9 per cent of all work-loss days due to acute conditions. Almost half of the days lost from work by males because of injuries were due to fractures, dislocations, sprains, and strains.



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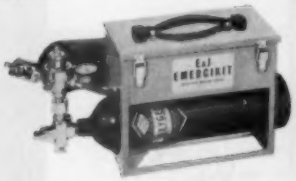


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Dial 333!

—From page 129

The present security program dates from 1942, when the corporation (then Nash-Kelvinator) had to institute some drastic reforms to qualify for aircraft engine contracts. Ted Smith was called in to reorganize fire protection measures.

What he found was startling, though not unusual for those times. With flammable liquids being used in large quantities, there wasn't a safety can in the plant. Fire-fighting apparatus was inadequate for increasing wartime needs, and much of it was outmoded. The plant protection force, though loyal, lacked training and many of its members were not in the best physical shape.

Those were difficult times. The armed forces and the war industries were scraping the bottom of the barrel for men. Every kind of equipment was scarce and procurement was regulated by a complicated system of priorities. But in spite of all these roadblocks, an efficient plant security force was recruited, trained, and equipped.

With the enormous expansion of the past five years, the plant security organization has kept pace with the plant's needs for protection. The tie-up with the city fire department has made possible a high degree of fire safety with a force of 86 men operating in three shifts.

Every detail of equipment and procedure is on paper in the files of the security department. In Ted Smith's mind is a complete map of the plant; it isn't exaggerating to say that he knows every piece of fire fighting apparatus, every pipe line and every valve on the premises.

Equipment. Water from the city mains, supplemented by a gravity tank, is available in every corner of the plant through hydrants and standpipes. Every approved type of extinguishing agent is employed—soda-acid, carbon dioxide, dry chemical, foam, and vaporizing liquid—in extinguishers ranging from 2-qt. vaporizing liquid up to 40-lb. wheeled models charged with the right extinguishing agent for the exposure. Supervisors and men are trained to use them—*while somebody dials 333!*

Automatic sprinklers protect some 96 per cent of the buildings. Sprinklers are supplemented by high-pressure carbon dioxide systems in such areas as spray booths and dip tanks.

Training. Plant guards are selected according to strict physical and mental standards and are given a thorough course of indoctrination on plant layout by buildings, departments, and operations. In the orientation program, emphasis is placed on strategic areas, such as paint dip tanks, flammable liquid storage, safety controls, water main layouts, sprinkler valves, and fire alarm procedure.

Training in basic fire fighting covers hose lines, extinguishers, fire pumps, special fire protection systems (such as high-pressure carbon dioxide), flammable liquid control, and the use of combustible gas indicators. Rescue work and the use of canister gas masks and supplied-

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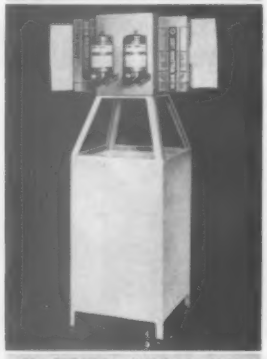
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air respirators are also part of the course.

Skill in first aid techniques is another goal, and the plant guards are ready for any type of emergency, from treating a cut finger to using oxygen apparatus in cases of asphyxiation, electric shock, or heart attacks. It is recognized, of course, that such service is for emergencies and is not a substitute for medical treatment.

All told, it takes about two years to develop a seasoned plant security guard.

Transmitting Alarms. At the main gate is the nerve center of the plant security system. Should a fire break out, the employee discovering it dials 333, giving the building number, bay, and section as recorded in large letters on the card by the phone. On receiving the call, the guard on duty uses the following procedure:

1. At the main guard house are eight boxes connected with the city fire department. Each corresponds to a plant gate, and the guard actuates the one closest to the fire.

2. The guard at the gate where the fire department is to enter is notified of the location of the fire and instructed to direct the apparatus to the scene.

3. By means of a direct telephone line, the guard at the main guard house checks with the city fire department to make sure the alarm has been received.

4. The autocall system is used to dispatch guards to the scene of the fire. Then the following are notified in turn: maintenance department, power house engineer, director of personnel, and plant security officials. In the event of work interruption, top management is notified.

After the fire is out, all extinguishers and equipment used to control it are replaced immediately by the plant guard from the reserve supply maintained at gates on the east and west sides of the plant. The same procedure is followed when an extinguisher is discharged accidentally or there is loss of pressure or contents.

A fire report made out by the supervisor of the area indicates the date, time, location, cause of fire, method of extinguishing, amount of damage, and other information. The fire is investigated by the plant security department, and a copy of the report is transmitted to top management, director of personnel, plant engineering department, insurance carriers and agents, and the safety department. Copies of these reports are kept on file for further investigation by Factory Insurance Association and Factory Mutual inspectors.

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gets to the heart of fire protection!

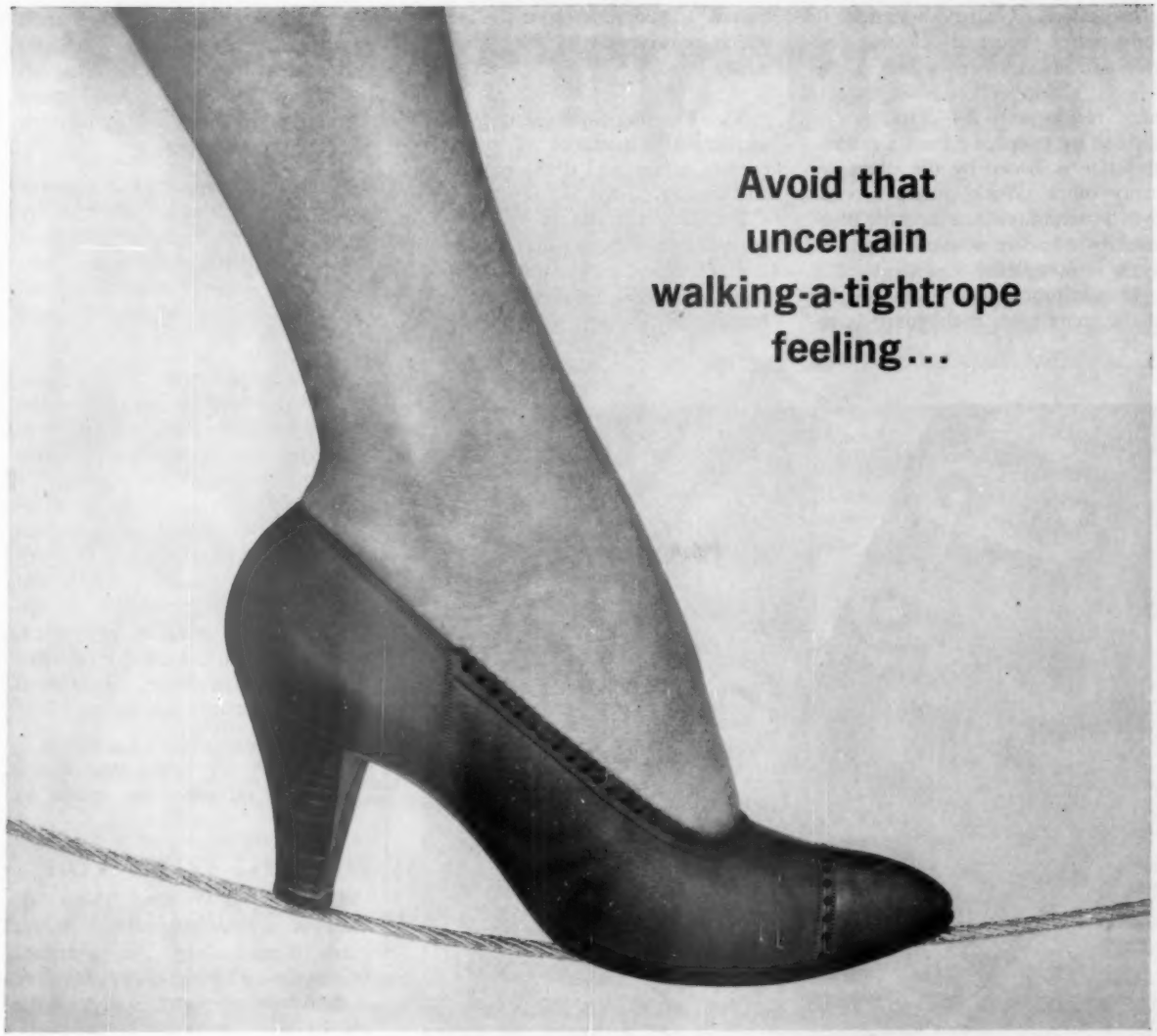


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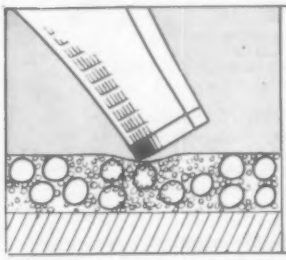


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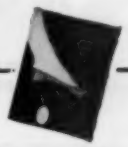


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Inspection. Guards assigned to daily patrol report all hazards and irregularities at the main gate. These reports are logged and the department responsible for correction is notified by telephone, and a follow-up letter is issued by the plant security office. Work orders are assigned to maintenance, and the plant security office is notified when the work is completed.

In addition to the daily logging at the main gate, each guard is required to compile a daily report which is reviewed by the plant security head.

Fire Fighting Equipment. Weekly inspection is made of all sprinkler control valves and divisional valves and sealing operation.

Hand extinguishers receive a complete inspection quarterly.

Each department receives a thorough quarterly inspection for fire hazards in addition to the daily inspection by the fire patrol guards. A written report is sent to each department head involved. Follow-up is made within seven days to insure corrective action. Many corrections are made on the spot.

Plant Equipment. As manpower permits, inspections are made of fire doors, hydrants, spray booths, hose houses, safety controls on gas and oil-burning units, city gas valves, safety cans, and flammable liquid containers.

Water Impairment. Should trouble in the water system require the closing of any valve, the guard at the main gate is notified immediately and the log entry posted.

When a valve is closed, an insurance sprinkler shutoff tag is tied on the valve stem and a card of notification of impaired protection is sent to the plant security office. If impairment is likely to be prolonged, a telephone call is made to the office of Factory Insurance Association and the following steps are taken:

1. Fire hose is laid from hydrants.
2. Temporary connections with other sprinklers are made by hose.
3. A guard is assigned to patrol the area.

Cutting and Welding. These operations are controlled by permit cards furnished by the insurance companies. The signed approval of a maintenance supervisor must be shown before work can begin. While the operation is in progress, a plant guard with fire apparatus is assigned to the location.

Similar precautions are required on all work done by outside contractors in the plant.

Flammable Liquids are divided into three classifications according



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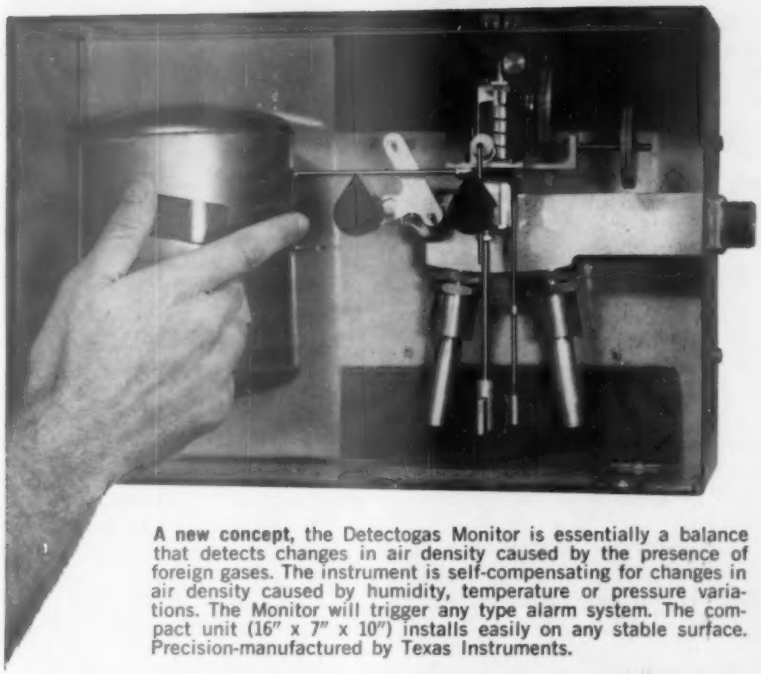


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Gas Safety News



A new concept, the Detectogas Monitor is essentially a balance that detects changes in air density caused by the presence of foreign gases. The instrument is self-compensating for changes in air density caused by humidity, temperature or pressure variations. The Monitor will trigger any type alarm system. The compact unit (16" x 7" x 10") installs easily on any stable surface. Precision-manufactured by Texas Instruments.

Scarcely a day goes by without news of a gas explosion somewhere in the U.S. Insurance claims for property damage alone mount into the millions annually. This is to say nothing of personal injury and lost lives.

Now, after four years of research and exhaustive testing, a truly practical gas detection instrument has been developed that puts gas safety within the reach of all. The revolutionary Detectogas Monitor is less than one-third the cost of old-style detectors.



Low cost Detectogas Monitor operates continuously without power or manpower

Unlike any other gas detection device—and about ⅓ the cost!— the Detectogas Unit monitors *continuously, without power* and *without attendant.* In normal, uncontaminated air a perfect balance is maintained (and stabilized against normal vibrations and air currents). But in the presence of lighter or heavier-than-air gases, the balance trips and triggers an explosion-proof switch. This can close any desired secondary circuit. Alarms can be sounded, valves shut off, exhaust fans started, phone calls placed —*automatically.*

Nothing detects gas like Detectogas. It is the first truly practical answer to the gas explosion hazard in schools, factories, warehouses, process plants, public and private buildings, hospitals, pipeline stations, refineries, bulk terminals, public works, laboratories, hotels, theaters, military installations and other facilities. The Detectogas Monitor can be the permanent key to your gas safety program. Assure an early demonstration in your facilities by writing today.



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to flashpoint and identified by color:

Class 1: 0° to 100°—red.
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Class 3: 201° and up—green.

This color scheme is used with 55-gal. drums, wash bench containers, safety cans, and other containers.

Drum storage is limited to specified outside and inside storage areas. All drums used in processes within the plant are limited to a two-day supply. Drums are protected by a pressure-release device equipped with flame arresters. Plant guards keep a close watch on these operations to make sure containers are in good condition and all rules are observed.

NO SMOKING areas are selected by the plant security department. These are identified by red boundary lines on the floor and NO SMOKING signs directly above them.

Daily Clock Runs. Under the company's working agreement with F.I.A. and Factory Mutuals, hourly clock runs throughout the entire plant are made seven days a week when the plant is not operating. Routes are laid out by plant security officials and reports are logged at the main gate house.

Periodic Inspections. Arrangements with F.I.A. and Factory Mutuals also call for regular thorough surveys. Particular attention is paid to:

1. Drain tests for sprinkler systems.
2. Water-flow tests covering fire pumps, city connections to the plant, the gravity tank, and other sources of water.
3. Carbon dioxide high-pressure system.
4. Overhead automatic foam extinguishers.
5. Overhead actuating devices.

Fire problems in connection with operations and investigations of fires that have occurred are discussed in monthly conferences with management.

Additional daily contact in an advisory capacity is maintained with department heads, the maintenance department, plant engineering department, insurance officials, and city and state officials.

New Construction. Plant expansion during the past few years has involved much construction work by outside contractors. On any changes to existing facilities under the direction of the plant engineer, plant engineering is advised of safety standards that must be incorporated into the program. This applies to a completely new building or to a new facility.

Committees. Monthly meetings of a top management committee include fire protection on the agenda.

The plant security department is always on the lookout for new developments in methods and equipment. Each item is judged for its contributions to fire safety, not for possible reduction in manpower. Ted Smith believes in all possible automatic devices for detection and extinguishment but, in his opinion based on 30 years' experience, no mechanical system can entirely replace an alert, intelligent guard making his regular rounds.



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Avoid unwanted duplications! You can put real "incentive" back in your safety contests; Select-A-Gift—the famous prestige gift plan allows the winner to *select his own gift* from an extensive array of America's most wanted gift items. (His family gets in on the fun of selecting, too.) With Select-A-Gift, you control the price range ($2 and up). Winners receive handsome presentation cards and full-color booklets—custom tailored to your program—picturing and describing their gift selections.

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Boots that bear this label B.F.Goodrich XtraTuf won't slip when floors are slick

B.F.Goodrich XtraTuf Anklefit boot has non-skid outsole that keeps workers sure-footed on slippery floors

How to keep workers sure-footed on floors slick with oil, grease? B.F.Goodrich tackled the problem—designed, tested, rejected. The result of this intensive research is the B.F.Goodrich XtraTuf Anklefit boot with a non-skid outsole that gives terrific traction, foot security even on the most slippery floors. And the tough neoprene rubber used in these boots resists oil, greases, fats, acids which cause most rubber to break down—so BFG XtraTuf Anklefit boots far outlast other boots in this kind of service.

These BFG boots also last longer because they have no exterior seams—the place where most leaks start. Unlike ordinary boots which are made with sections of rubber joined together at seams, the XtraTuf Anklefit boot has its skin "dipped" on, just like taffy is dipped on an apple. It's completely covered with a thick, seamless layer of neoprene.

B.F.Goodrich XtraTuf neoprene footwear comes in regular and anklefit boots, industrial work shoes with plain or steel safety toes, and are also available in an over-the-shoe style. For full information and a catalog, call your B.F.Goodrich distributor, or contact *B.F.Goodrich Industrial Footwear, Dept. N, Watertown 72, Mass.*

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INDUSTRIAL FOOTWEAR BY B.F.Goodrich

Local Centers Aid Rehabilitation Progress

Extensive us of local rehabilitation centers is helping achieve significant progress in the rehabilitation of workers seriously injured in industrial accidents, a prominent insurance official reported recently.

J. E. Linster, vice-president of Employers Mutuals of Wausau, reports that "encouraging" progress has been made in recent years by a number of medical centers throughout the nation in assisting even paraplegics and quadriplegics regain a relatively active and useful status.

Between 1950 and 1960, Employers Mutuals company assumed responsibility for rehabilitation of 76 paraplegic and quadriplegic cases included among a total of 2,489,365 claims resulting from industrial accidents. Through use of a number of private rehabilitation centers, 69 per cent of the paraplegic and quadriplegic cases were successfully rehabilitated and eight of the men were even able to return to gainful employment.

"Most effective results are achieved by bringing rehabilitation to the patient rather than by bringing the patient to rehabilitation," Linster explained. "Making it possible for the patient to remain in his own community, among friends and relatives, has an important effect because of the moral support and encouragement received from people close to him in a home environment."

Successful rehabilitation of seriously injured workers requires the coordinated efforts of many medical and vocational specialists. Numerous private rehabilitation centers are now able to provide these varied services and many of the cases once considered hopeless are now being restored to active, useful lives.

Although the cost of treatment in rehabilitation centers has averaged more than $6,000 per paraplegic and quadriplegic case, industry considers this money well spent, the insurance executive declared. Aside from the humanitarian considerations involved, medical costs would have been substantially greater if rehabilitation efforts were less successful, he said.

Included among rehabilitation centers that have done outstanding work in returning injured industrial workers to more normal lives, Linster listed the following:

New York University — Bellevue Medical Center Institute of Physical Medicine and Rehabilitation, New York 16.

Kessler Institute of Rehabilitation, West Orange, N. J.

Mayo Clinic, Rochester, Minn.

The Jewish Hospital of St. Louis, Rehabilitation Division, St. Louis, Mo.

California Rehabilitation Center, Vallejo, Calif.

Baylor University Hospital, Dallas, Tex.

The Bay State Medical Rehabilitation Clinic, Boston 14, Mass.

Duke University, Durham, N. C.

Younker Memorial Rehabilitation Center, Des Moines, Iowa.

Institute of Physical Medicine and Rehabilitation, Peoria, Ill.

Charlotte Rehabilitation Hospital, Charlotte, N. C.

Wisconsin Neurological Foundation, Madison, Wis.

Rehabilitation Institute of Chicago, Chicago 11.



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It costs less than a fourth of a cent to clean a pair of really grimy hands with Go-Jo Creme Hand Cleaner

Gojer, Inc., Akron, Ohio, manufactures a creme type hand cleaner that is truly effective in removing even the most deeply-imbedded grease, grime and stubborn industrial soils. Compounded from highest quality chemical ingredients, Go-Jo Creme Hand Cleaner still costs less than one-fourth cent per clean-up. Go-Jo Creme Hand Cleaner also has a skin conditioning action that workers appreciate. Formulated with soothing emollients, it guards hands against cracking, drying and chapping, and replaces natural skin oils that many industrial chemicals remove.

Go-Jo Creme Hand Cleaner contains GT-7, a powerful antiseptic, to help prevent industrial dermatitis, which is often caused by an accumulation of harmful bacteria. A report by an independent microbiological testing laboratory (name on request) spells out the facts: In tests performed under everyday working conditions, on subjects representing a wide range of occupations, Go-Jo Creme Hand Cleaner reduced the bacterial count on their hands by over 99%.



Heavy-duty "One-Shot" Dispenser by Go-Jo eliminates mess and waste and cuts hand-cleaning costs 75%. One pull of the handle delivers just the right amount for a quick, thorough clean-up.

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Consolidated Paper Corp., Limited, Laurentide Div., Grand'Mere, Quebec, Canada.

The Dow Chemical Co., Midland Location, Midland, Mich.

Ford Motor Co. (4): Buffalo Stamping Plant, Metal Stamping Div.; Cleveland Central Services, Engine and Foundry Div.; Kansas City Assembly Plant, Ford Div.; Rawsonville Plant, Hardware and Accessories Div.

General Dynamics Corp., Convair (Astronautics) Div., San Diego, Calif.

General Electric Co. (2): Irmo Capacitor Plant, Irmo, S. C.; Ord-

Top Safety Award for Gary Steel Works



Howard Pyle (left), president of the National Safety Council, presents Award of Honor to F. A. Dudderar, general superintendent of the U. S. Steel's Gary Steel Works, in recognition of plant's world safety record for the steel industry. A. G. Whisman, general supervisor of safety at plant, and Edward C. Logelin, vice-president of U. S. Steel in Chicago, look on at ceremonies in Gary. Employees of Gary Steel Works set a world's safety record for the steel industry of 17,133,243 man-hours worked without a disabling injury for the period of Dec. 28, 1959 to May 28, 1960. (U. S. Steel Photo)

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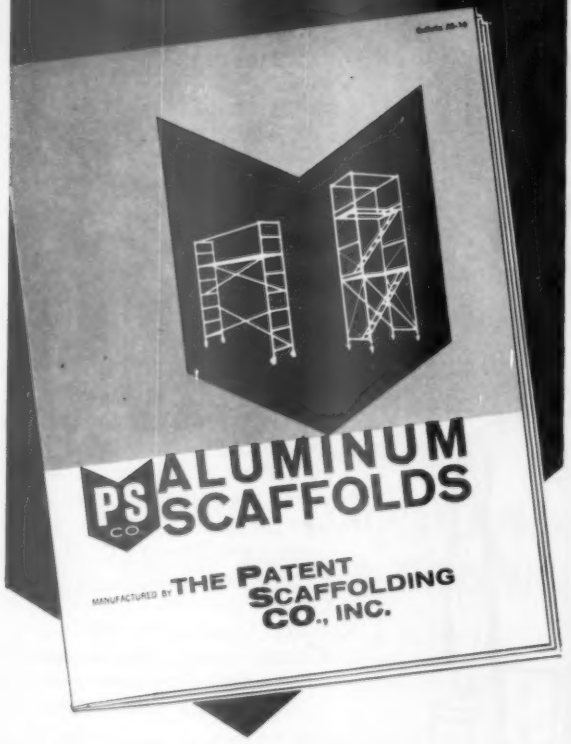
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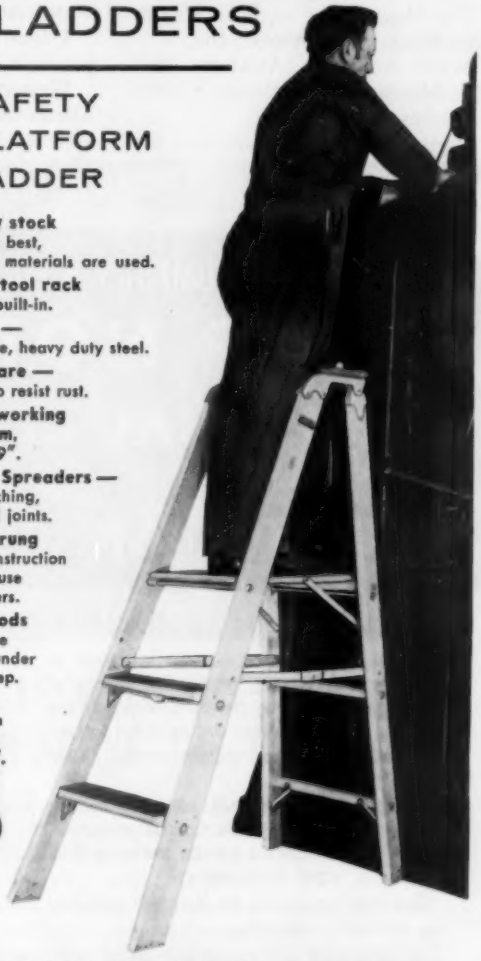
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Hughes Aircraft Co., Ground Systems Group, Fullerton, Calif.

Louisville and Nashville Railroad Co., Louisville, Ky., Division.

The Magnavox Co., Fort Wayne Area Plants, Fort Wayne, Ind.

North American Aviation, Inc. (2): Missile Div., Downey, Calif.; Columbus, Ohio, Div.

Northern Pacific Railway, St. Paul, Minn.

Reeves Brothers, Inc., Vulcan Plant, Buena Vista, Va.

Royal McBee Corp., Hartford Plants.

Ryan Aeronautical Co., Main Plant, San Diego, Calif.

U. S. Army Ordnance Corp., Watervliet, N. Y., Arsenal.

United States Rubber Co., Naugatuck, Conn., Footwear Plant.

Western Electric Co., Inc. (3): Allentown, Pa., Works; Merrimack Works, North Andover, Mass.; Tonawanda Plant, Buffalo, N. Y.

Westinghouse Electric Corp. (3): Semiconductor Dept., Youngwood, Pa.; Westinghouse Meter Plant, Raleigh, N. C.; Television-Radio Div., Metuchen, N. J.

AWARD OF MERIT

American Viscose Corp., Fredericksburg, Va., Plant.

Argonne National Laboratory, Argonne, Ill., and Idaho Falls, Idaho.

Atlantic Coast Line Railway Co., Transportation Dept.

The Bahrain Petroleum Co. Limited, Personnel Relations & Services Div., Community & Employee Services Dept.

The Budd Co., Charlevoix Plant, Detroit, Mich.

Central Maine Power Co., Western Div.

Charleston & Western Carolina Railway Co. (ACL System).

Chrysler Corp. (6): Plymouth Detroit Assembly Plant, Car & Truck Assembly Group; Jefferson Assembly Plant, Car & Truck Assembly Group; Nine Mile Plant, Stamping Group; Los Angeles Plant, Car & Truck Assembly Group; New Castle Machining Plant, Power Train Group; Parts & Equipment Manufacturing Div., Highland Park Plant, Detroit, Mich.

Continental-Emsco Co., Houston Plant, Houston, Texas.

Creole Petroleum Corp., Caripito Refinery, Caracas, Venezuela.

Electric Energy, Inc., Joppa, Ill.

TYPES OF AWARDS

FOUR TYPES of awards are given by the National Safety Council to members for outstanding achievement in accident prevention.

1. Award of Honor
Available to (a) units which complete 3,000,000 man-hours without a disabling injury, and (b) units whose records, though not perfect, meet exacting standards. These standards take into account the previous experience of the unit as well as the experience of the industry in which it operates. A unit must qualify on both frequency and severity rates.

2. Award of Merit
Has similar but less exacting requirements. Minimum number of man-hours is 1,000,000.

3. Certificate of Commendation
For injury-free records covering one or more calendar years and totaling 200,000 to 1,000,000 man-hours.

4. President's Letter
For injury-free records covering one or more calendar years and totaling less than 200,000 man-hours.

Details of eligibility requirements may be obtained by writing to Statistics Division, National Safety Council.

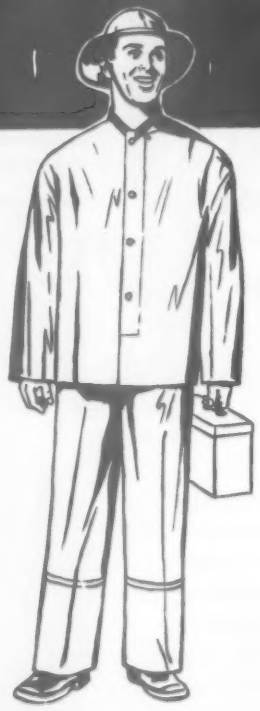
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Overalls feature a bib front, adjustable webbing suspenders, waist tie cords for side adjustment, cut-off band on overalls permits shortening without frayed edges developing.

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FIRST PHONE CALL VIA MAN-MADE SATELLITE!



"Project Echo" satellite went into a near-perfect circular orbit 1000 miles high, circling the earth once every two hours. Its orbital path covered all parts of the U. S.

BELL TELEPHONE LABORATORIES BOUNCES VOICE OFF SPHERE PLACED IN ORBIT A THOUSAND MILES ABOVE THE EARTH

Think of watching a royal wedding in Europe by live TV, or telephoning to Singapore or Calcutta—*by way of outer-space satellites!* A mere dream a few years ago, this idea is now a giant step closer to reality.

Bell Telephone Laboratories recently took the step by successfully bouncing a phone call between its Holmdel, N. J., test site and the Jet Propulsion Laboratory of the National Aeronautics and Space Administration (NASA) in Goldstone, California. The reflector was a 100-foot sphere of aluminized plastic orbiting the earth 1000 miles up.

Dramatic application of telephone science

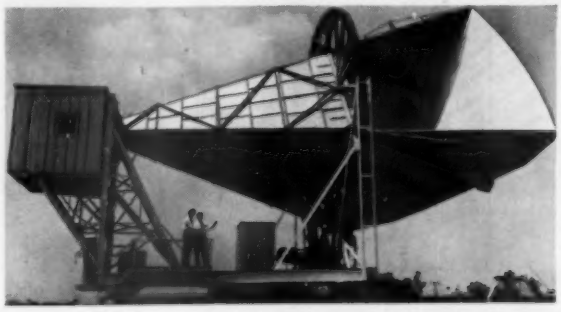
Sponsored by NASA, this dramatic experiment—known as "Project Echo"—relied heavily on telephone science for its fulfillment . . .

▪ The Delta rocket which carried the satellite into space was steered into a precise orbit by the Bell Laboratories Command Guidance System. This is the same system which recently guided the remarkable Tiros I weather satellite into its near-perfect circular orbit.

▪ To pick up the signals, a special horn-reflector antenna was used. Previously perfected by Bell Laboratories for microwave radio relay, it is virtually immune to common radio "noise" interference. The amplifier—also a Laboratories development—was a traveling wave "maser" with very low noise susceptibility. The signals were still further protected from noise by a special FM receiving technique invented at Bell Laboratories.

"Project Echo" foreshadows the day when numerous man-made satellites might be in orbit all around the earth, acting as 24-hour-a-day relay stations for TV programs and phone calls between all nations.

This experiment shows how the Bell Telephone System is working to advance space communication. Just as we pioneered in world-wide telephone service by radio and cable, so we are pioneering now in using outer space to improve communications on earth. It's part of our job, and we are a long way toward the goal.



Giant ultra-sensitive horn-reflector antenna which received signals bounced off the satellite. It is located at Bell Telephone Laboratories, Holmdel, New Jersey.

BELL TELEPHONE SYSTEM

Ford Motor Co. (14): Lima Engine Plant, Engine and Foundry Div.; Dearborn Stamping Plant, Metal Stamping Div.; Cleveland Foundry, Engine and Foundry Div.; Styling Center; Sharonville Plant, Transmission and Chassis Div.; Cleveland Stamping Plant, Metal Stamping Div.; Engineering and Research Staff; Frame Plant, Metal Stamping Div.; Atlanta Assembly Plant, Ford Div.; Twin Cities Assembly Plant, Ford Div.; Nashville Glass Plant, Glass Div.; Transportation & Traffic Services, Manufacturing Services; Dearborn Iron Foundry, Engine and Foundry Div.; Lorain Assembly Plant, Ford Div.

General Electric Co. (5): Large Steam Turbine-Generator Dept., Schenectady, N. Y.; Murfreesboro Plant, Murfreesboro, Tenn.; Microwave Laboratory, Palo Alto, Calif.; Parts Distribution Center, Zanesville, Ohio; Fuels Preparation Dept., Richland, Wash.

B. F. Goodrich, Sponge Products, Shelton-Derby, Conn.

Hughes Aircraft Co., Ground Systems Group, Fullerton, Calif.

Illinois Central Railroad (2): Chicago; Kentucky Div.

International Business Machines Corp., Supplies Div., Greencastle, Ind.

International Petroleum Co., Ltd., Talara Operations, Talara-Peru, S.A.

Kaiser Aluminum & Chemical Corp., Permanente Foil Plant, Permanente, Calif.

Kennecott Copper Corp., Utah Copper Div. Smelter, Magna, Utah.

Lockheed Aircraft Corp., Missiles and Space Div., Vandenberg Air Force Base, Calif.

Merck & Co., Inc.; Cherokee Plant.

National Aeronautics and Space Administration, Lewis Research Center, Cleveland, Ohio.

Nekoosa-Edwards Paper Co., Port Edwards Mill, Port Edwards, Wis.

The Newburgh and South Shore Railway Co., Cleveland, Ohio.

Plymouth County Electric Co., Plymouth, Mass.

Public Service Company of Colorado (2): Entire Company; Electric Operations.

Rocky Mount Mills, Rocky Mount, N. C.

Shawinigan Chemicals Ltd. (2): Staff Members; Carbide Div., both of Shawinigan, Que., Canada.

Shell Chemical Co., Torrance, Calif., Plant.

Southern Pacific Co. (Pacific Lines), Los Angeles.

Standard Oil Company of Texas, El Paso, Tex., Refinery.

Standard-Vacuum Oil Company, Palembang Refinery, Palembang, Sumatra, Indonesia.

Sylvania Electric Products, Inc., York Parts Div. Plant, York, Pa.

Tooele Ordnance Depot, Tooele, Utah.

Union Carbide Nuclear Co., Oak Ridge Gaseous Diffusion Plant, Oak Ridge, Tenn.

United States Rubber Co., Naugatuck, Chemical Div., Naugatuck Plant, Naugatuck, Conn.

United States Steel Corp., Fairfield Steel Works, Tennessee Coal & Iron Div.

Westinghouse Electric Corp. (3): Trenton Works-Lamp Div.; Electronic Tube Div., Elmira Works, Elmira, N. Y.; Lima Works, Lima, Ohio.

Winthrop Laboratories, Rensselaer, N. Y.

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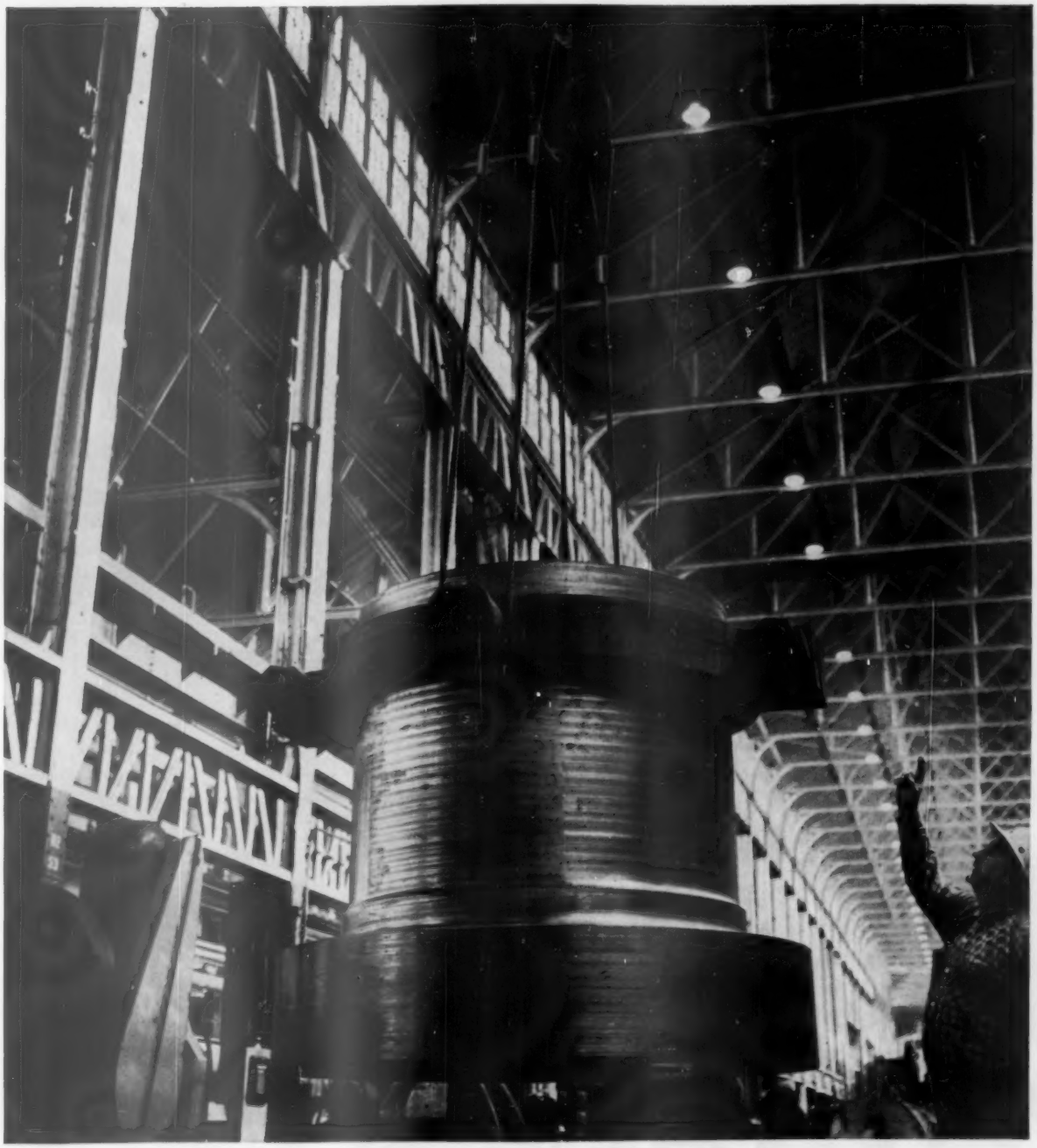
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Bethlehem slings can handle just about any lifting assignment. They have the toughness and flexibility needed to handle heavy loads. And they come in just about any style or size.

There may be a job in your shop right now for which a Bethlehem sling might be ideal. Bethlehem's nearest sales office will be pleased to provide full details.

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BETHLEHEM STEEL

AROUND THE COMPASS

ACTIVITIES • PROGRAMS • EVENTS

By **THOMAS J. NOLAN**
Field Service Department, NSC

Delaware Safety Council Pushes Boating Safety

The fourth annual summer safety meeting of the Delaware Safety Council at Rehoboth, Del., featured boating and water safety. Dr. Wilfred W. Smith of the Du Pont Company and commander of the U.S. Coast Guard Auxiliary, Flotilla 11, showed the water safety film, "Outboard Outings." Questions and answers followed.

An outboard boat safety display, prepared by the Delaware Safety Council, was a prominent exhibit at the state fair. A large painted sign serving as a backdrop asked, "Is Your Boat Rigged for Safety?" and called attention to several safety points marked on an actual boat. This exhibit was also on display at

—*To page 198*



Delaware Safety Council installed this exhibit, calling attention to safety check points in boating at the state fair this summer. The exhibit went on display at Harrington, Rehoboth Beach, and at Du Pont Company plants.

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Donald M. Rehm

Donald M. Rehm has joined the National Safety Council's Field Service Department as program consultant. He comes from the American Wood Preservers Institute where he served as managing editor of *Wood Preserving News* for more than five years. His previous experience includes work on trade journals in the fields of railroading, shipping, and grain handling and processing. Among his new duties will be the editorial preparation of "Around the Compass." Tom Nolan, program consultant and previous editor of this page, will assume staff responsibilities for the Inventory and Appraisal Program of the Conference of State and Local Safety Organizations.

the Harrington Fair and at Rehoboth Beach, before circulation among Du Pont Company plants in the Wilmington area.

Washington Council Offers Highway Fact Book

A 46-page booklet has been published for the second year by the Washington State Safety Council to present highway accident facts to news editors in the state of Washington. It is entitled *Traffic Safety Reference File*.

Accidents of 1958 and 1959 are analyzed according to urban and rural location, city and county location, month, time of day, day of the week, holiday week ends, and by age of persons injured and killed.

Other sections show state motor vehicle registration by years and by counties; age of drivers licensed, and of those involved in accidents; state, county, and city road mileage in each county; population and mileage death rates for 11 western states; and motor vehicle registration figures for the United States—both historical totals and the latest state-by-state breakdown.

Ontario Safety League Warns Aging Citizens

The Ontario Safety League has distributed a reprint of "The Senior Citizen in Traffic," a two-page feature article in *Traffic Safety* August 1960. A covering letter entitled,

the story —



of the foot that was still there!

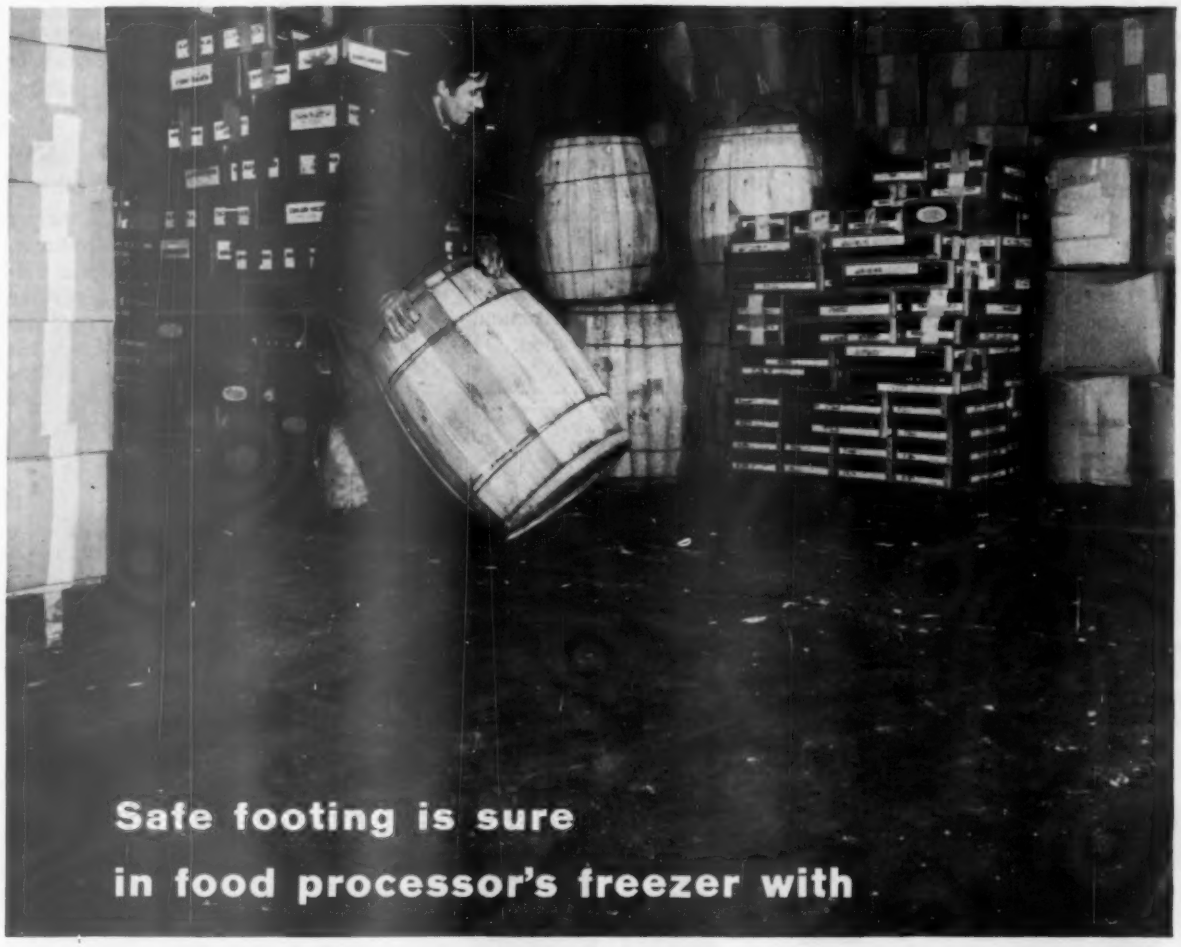
Only because of the safety factor, which is an inherent feature of the MOTT mower design . . . was the boy's foot spared! In lawn mowing . . . "caution" and "warning" are not enough. SAFETY must be designed, engineered and built into the mower!

MOTT Hammer-Knife mowers are the safest . . . the most versatile mowers available! The lightweight free swinging knives, when rotated at proper operational speeds, have enough force to cut grass and tall weeds cleanly, but will retract when they strike solid objects. They act as a built-in shock absorber to minimize the force of the blow with little damage to the knives and the mower . . . and with very little tendency to throw the struck objects. MOTT Hammer-Knife mowers are available in a full range of sizes from 18" models to 19 ft. gangs.

Write for the "story of the shoe" . . . and see your MOTT dealer for a "Safety" mower demonstration!

mott HAMMER KNIFE

MOTT CORPORATION



A.W. ALGRIP abrasive flooring

Bits of food just naturally fall from barrels and open cartons onto the floor of this freezer at the warehouse of a nationally-known frozen food processor, but A. W. ALGRIP eliminates slipping and sliding . . . helps prevent accidents.

A. W. ALGRIP rolled steel floor plate is produced by Alan Wood Steel Company under a patented process by which an abrasive—just like the kind used in grinding wheels—is embedded to a controlled depth. It becomes an integral part of a tough steel plate.

A. W. ALGRIP can be used as independent flooring . . . or as flooring overlay, on level or inclined surfaces. Put your plant on a safe footing, with A. W. ALGRIP . . . Approved for Safety by Underwriters' Laboratories. Write for Bulletin AL-S1.



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"Letter to an Older Driver," refers diplomatically to the realities of growing older: perception is declining; judgment is slower; physical condition is going down; reactions are slower; and the body is more susceptible to injury and death.

Turning to driving habits, the letter warns aging drivers bluntly that "You don't yield the right-of-way often enough; you are making too many improper turns; and you are disregarding many signals."

The letter closes with a request to "face driving ability realistically and to have periodic examinations; face limitations; take some brush-up lessons from a driving instructor; keep up-to-date on rules of the road; face with dignity the fact that one day you must give up the keys."

Two Managers Resign Posts

J. I. Jackson has resigned as executive director of Dade County Citizens Safety Council, Miami, Fla. He is joining the International Cooperation Administration.



Jack Gilliam, executive secretary, New Mexico Citizen's Council for Traffic Safety, resigned August 1. Future plans of the council will be announced.

Council Gets New Leadership

Long Beach (Calif.) Safety Council, Inc., has two new officers. The president now is William Salvin, public relations manager of the Long Beach Savings & Loan Association. Robert W. Ruchhoft has been appointed manager of the council. Formerly he was employed with the Long Beach Chamber of Commerce in membership solicitation.

Massachusetts to Rely on Accreditation by NSC

The Massachusetts legislature in a recent bill recognized and put reliance on the accreditation procedure of the National Safety Council. The bill specifies that local or state safety council representatives on the official state Highway Safety Committee must come from safety councils accredited by the National Safety Council.

It is believed that this is the first instance in which a state legislature has recognized the accreditation process. Governor Furcolo has signed the bill.

Justice Tom Clark Suggests Driving Program

Tom C. Clark, associate justice of the United States Supreme Court, recently offered a three-point program for highway safety. Speaking recently at the annual meeting of the automobile industry's Highway Safety Committee, Justice Clark



"She's coming up the driveway now!"



FOR MORE USES... MORE SAFETY— BUY Bally-Hi

Open construction design allows the "Bally-Hi"—a two-stage ladder mounted on a wheeled frame—to move between and over obstacles such as machines, furniture or rows of seats—where ordinary ladders can't go. Collapsible outriggers add extra stability . . . prevent tipping over. It reaches heights to 25 ft. . . . anchors to floor firmly. And it's so compact, it goes through average size doorways.

The "Bally-Hi" ladder is loaded with extra safety and comfort features. Ladder guard rails, including a collapsible pulpit type at the top, help protect the user. A flat step instead of an uncomfortable rung makes working at heights for long periods of time much easier. Locking devices hold the ladder even on sloping or uneven ground. "Bally-Hi" may be truck-mounted.

When the ladder is collapsed, the overall height of the entire unit is only 77", permitting the "Bally-Hi" to go easily through even ordinary size doorways.

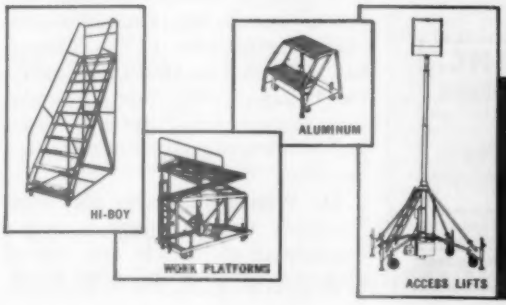


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EQUIPMENT FOR WORKING *Safely* ABOVE FLOOR LEVEL

urged compulsory vehicle inspection laws in all states, mandatory driver education before issuance of a driver's license, and improved traffic court systems.

Expanding on the subject of driver education, the justice recommended that such courses be required in the high school curriculum. "Better yet," he said, "if we geared our original operator licensing to driver instruction programs in high schools, it would be a godsend. Why not require an original applicant for a driver's license, whether an adult or teen-ager, to graduate from such a course?"

Kansas Council Appoints Secretary

An announcement from the Kansas Safety Council, Topeka, states that Mr. Harold Pellegrino has been elected as executive secretary of the organization by its board of directors. Mr. Pellegrino has been serving as acting secretary since the death of Merton Earl earlier this year.

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Paul T. Beverforden

Ohio District Director Named

Paul T. Beverforden has been appointed NSC district director for Ohio. He will headquarter in Columbus, Ohio, and began his new job August 15.

Beverforden, a native of Indiana, comes to the Council from the Indiana State Police. He joined the organization in 1933 as a trooper and during his career rose to the position of executive officer. He also was at one time director of safety and personnel and assistant to the president of a Fort Wayne firm.

He attended traffic schools at Purdue and Northwestern universities, and is a member of the International Association of Chiefs of Police, the Council of Safety Supervisors, and the Indiana Association of Chiefs of Police.

New Council Forming In Delaware (Ind.) County

A group of more than 75 citizens met in Muncie, Ind., June 28 to consider organization of a Citizens' Safety Council for Delaware County, the Indiana Traffic Safety Foundation reports. Civic, service, labor, and business organizations were represented.

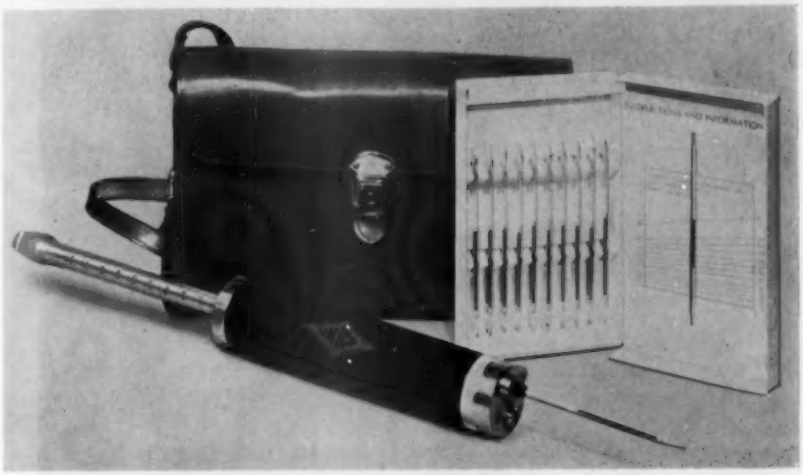
Dr. William A. Sutton, Ball State Teacher's College professor and a councilman of Muncie, was elected chairman to serve during the coun-

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Tubes for Measuring Atmospheric Concentrations

Tube No.	Detector Tube	Measurable Concentration
102A	Acetone—high range	0.10—7.0%
102B	Acetone—low range	25—300 PPM
101	Acetylene	100—1000 PPM
128	Acrylonitrile	.0020—5.0%
105A	Ammonia—high range	1.0—25%
105B	Ammonia—low range	10—400 PPM
118A	Benzene	5—250 PPM
***118B**	**Benzene—in the presence of other aromatic hydrocarbons**	**10—700 PPM**
114	Bromine	1—1600 PPM
126A	Carbon Dioxide—high range	0.10—5.0%
126B	Carbon Dioxide—low range	500—12,000 PPM
***141**	**Carbon Disulfide**	**10-200PPM**
106A	Carbon Monoxide	25—4000 PPM
106C	Carbon Monoxide in presence of hydrocarbons and nitrous gases	25—4000 PPM
109	Chlorine	1—150 PPM
116	Chlorine Dioxide	10—500 PPM
115	Cyclohexane	0.010—0.60%
107	Diethyl Ether (Ether)	0.010—4.0%
123	Dimethyl Ether	0.010—1.5%
104A	Ethanol (Alcohol)—high range	0.10—5.0%
111	Ethyl Acetate	0.040—7.0%
108B	Ethylene—low range	0.10—50 PPM
122A	Ethylene Oxide—high range	0.010—8.0%
113	n-Hexane	0.010—0.60%
112A	Hydrogen Cyanide—high range	0.010—3.0%
120A	Hydrogen Sulfide—high range	20—1700 PPM
120B	Hydrogen Sulfide—low range	1—70 PPM
120C	Hydrogen Sulfide—in the presence of sulfur dioxide	20—1500 PPM
***142**	**Mercury**	**.10-2.0 mg/M³**
119A	Methanol—high range	0.020—8.0%
129	Nickel Carbonyl	20—700 PPM
117	Nitrogen Dioxide	0.1—1000 PPM
121A	Phosphine, High Range	20—900 PPM
121B	Phosphine, Low Range	5—90 PPM
103A	Sulfur Dioxide—high range	0.050—10.0%
103B	Sulfur Dioxide—mid range	10—1000 PPM
103C	Sulfur Dioxide—low range	5—300 PPM
124	Toluene	5—1000 PPM
134	Trichloroethylene Perchloroethylene	10—400 PPM 10—400 PPM
132	Vinyl Chloride	0.050—1.0%

***New tubes tested and approved. Reports available.**



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cil's formation. A committee, now drafting organizational plans, has reported at a second public meeting September 27 in the Muncie City Council chambers.

Sacramento Names New Manager

A recent report from the Sacramento (Calif.) Safety Council announces the appointment of W. A. "Doc" Huggins as manager of the council. Huggins retired a year ago as traffic coordinator for the state of California. He is well known and has many friends in the traffic field. Former manager James R. Jarrell resigned to return to his previous position as Northern District manager of the National Automobile Club.

Monthly News Bulletin Inaugurated

Ray Norwood, director of the Seattle-King County Safety Council, recently sent in to us the first five editions of *Green Cross Soundings.* This monthly news bulletin replaces *Safety News,* a printed publication issued periodically.

The new bulletin is dedicated to providing timely facts, stories, incidents, and other pertinent information on safety to as many persons as possible.

Minnesota Action and Reaction

When Alfred W. Luecke, executive secretary of the Minnesota Safety Council, read a letter about adoption of a resolution by the Executive Committee of the Confer-



"She crosses streets against the lights."

ence of State and Local Safety Organizations reaffirming NSC's Policy on Miniature Motor Vehicles, he submitted a report on what was being done in Minnesota.

The Minnesota Safety Council issued a policy statement on vehicles of this type earlier this year. A copy of this resolution was sent to all 150 local safety councils throughout the state, asking them to take the same action at their next council meeting. Mr. Luecke reports the majority of the councils have adopted similar action.

Kansas City Director Named

Thomas L. Dahl has been appointed executive director of the Greater Kansas City Area Safety Council, according to C. Myron Lytle, president of the council.

Dahl has completed courses in accident prevention at several universities and colleges. He is a member of the safety committees of the International Association of Chiefs of Police, the American Trucking Association, the American Society of Safety Engineers, the National Aeronautics Association, and the Massachusetts Public Service Commission.

George Burns, director of the council for the past 22 years, will continue as consultant, working with various committees to develop and activate programs.

Place Mats New Medium For Safety Messages

The Michigan State Safety Commission has developed a new idea for getting across the traffic safety message to visiting motorists. This organization is distributing throughout the state place mats for restaurants catering to tourists.

Rather than just telling them to be safe, the Commission decided to show specific situations and actions to take or to avoid—keeping driver's license up-to-date, stopping time, restraint in drinking, and in letting the gaze wander while driving. Other drawings and text advise what to do if the driver gets sleepy or encounters a school bus. The mats caution against hogging the road and call attention to road signs intended for motorists' help and guidance.



ACCIDENT

isn't a nice word nor a pleasant subject to think about. But it's an unusual plant manager indeed who does not spend time and thought reviewing accidents . . . their causes and prevention, so that he can equip men and machines for maximum safety.

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T-37

AMPCO® SAFETY TOOLS

Revise Standards for Safety Signs

The design, application and use of signs or symbols to indicate specific industrial hazards are included in the American Standard Specifications for *Industrial Accident Prevention Signs, Z35.1-1959,* approved and published by the American Standards Association.

This standard is a revision of Z35.1-1941, and lays particular stress upon the need for uniformity, at all industrial levels, of accident prevention signs. It provides a wide range of safety signs excluding those designed for streets, highways, railroads, and marine regulations. A number of specific hazards are defined. This standard does not apply to plant bulletin boards or to safety posters.

The aim is to eliminate, where possible, the indiscriminate posting of haphazardly selected signs, and to install signs of certain designs for definite purposes. To achieve the goal of maximum industrial safety, reactions to signs should be automatic. When all concerns use signs of definite design and color to warn of particular hazards, to express caution, to provide general information, or to point out directions, the use of accident prevention signs will become more effective. The ultimate objective is to make workers familiar with the necessary sign designs, no matter where they may work. Uniformity of design and color is the key to this objective.

The standard covers five basic groups of safety signs: danger signs, caution signs, safety instruction signs, directional signs, and informational signs. Included in the section on danger signs is the newly approved American Standard Radiation Symbol.

Two appendices have been included which are not part of the standard. However, it was felt that their inclusion would facilitate the use of the standard. The appendices cover sign construction, materials and finishes, and sign locations and maintenance.

American Standard Industrial Accident Prevention Signs, Z35.1-1959, is available at $1.35 per copy from the American Standards Association, 10 East 40th Street, New York 16.

Panic or Action?

If a person is injured in your plant, who does what for the injured man?

In times of danger, few persons act normally. They either go to pieces or display strength, courage, and presence of mind they never knew they had. But unless there is planned procedure and the men are trained in this procedure, people are more likely to panic and do the wrong thing—if anything.

Here are some important steps to be taken in an emergency, as outlined in *Management Brief* No. 83 of the Institute of Scrap Iron and Steel:

1. If a machine is involved, stop machine. Shut off power.
2. If victim is caught in machine, in or under machine, in or under materials, release him as carefully as possible.
3. Check for broken bones or arterial bleeding.
4. Give required first aid.
5. If necessary, get him to a doctor or hospital.
6. Notify doctor or hospital by telephone.
7. If the injured man will be detained past his working hours, or is seriously injured, notify his family.

If these steps are to be taken calmly and correctly, supervisors and workers must be well indoctrinated in what each is to do, assuming that the injured man cannot help himself.

At each operation, decide who will stop the machine. Those assigned to this task should be trained so there will be no doubt as to how it is done. Check each machine and work area to determine what might happen and what steps would be required to rescue the victim if he should be caught.

To insure competent first-aid treatment, several regular employees should complete a course in first aid. This may be obtained through the local American Red Cross.

If the injured man must be taken to the hospital, what transportation is available? What is the shortest route? Are the telephone numbers of the doctor, hospital, and ambulance handy at all telephones?

If it is necessary to notify the injured man's family, someone from top management should do so.

INSIDE and OUT... NOW MORE COMFORTABLE MORE DURABLE and safer than ever!



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strong, pliable, comfortable, easy to clean

1) The polyethylene Suspension is a *single unit* composing both a "fixed" safety factor as well as an "adjustable" clearance from the shell. EACH ONE, INDIVIDUALLY, PASSES FEDERAL SPECIFICATIONS! The entire Suspension, including the headband, is soft and pliable for comfort, rugged for safety, clean in design that stays clean and is easy to clean.

2) The Shell has an added "veil" of fine glass fibres that achieves a thin layer of resin and glass fibres close to the surface for superior weathering and abrasion resistance. These "two features" are exclusive with FIBRE-METAL!

3) New "flush buttons" in shell and headband increase wearing comfort.

4) Polyethylene Suspension will not mildew, sour or rot. Easily cleaned or sterilized. Unaffected by detergents.

5) All edges of suspension rounded for comfort.

6) Laces are recessed to prevent discomfort ...and to adjust for depth.

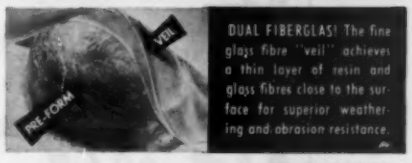
7) Triple adjustment of headband to *raise, lower or tilt* headband to increase individual comfort or to adjust for adverse work conditions.

8) Provision for chin strap in every hat and cap.

This NEW DUAL Suspension is interchangeable in *SuperGlas, SuperLite* and *SuperLectric* Hats and Caps...and is interchangeable with all Fibre-Metal Suspensions in the field.


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Small Business and Associations

—From page 11

are only 3,100 companies that employ a thousand or more workers.

Many surveys conducted through various associations in cooperation with the NSC Small Business and Associations Division have found major accident problems in small business organizations.

All too often, the small business man feels he can't take time for safety. Since someone must tend the shop, it's rare he finds time to participate in safety conferences developed specifically for the small business operator.

Even the insurance organization must curtail the amount of time provided, since economics won't permit assignment of the number of insurance safety engineers required to provide inspection and consulting services on a scheduled basis.

The high accident frequency of the small business organization is also of concern to the safety engineer of the medium or large company. The manual rate for a specific industry is generally predicated on the experience of *all* units in the state without regard to size or excellence of the safety program.

Consequently, the cost-conscious safety engineer will exert every effort to align his company with the association or local safety council in developing an effective safety program that will reach all members regardless of size of the unit.

Discuss this fact with your firm's top management, so they might influence a cooperative safety effort through the association representing your industry. If such a program is in operation, work with top management in extending the influence of such a program to all association members.

Industry-wide reduction of accident experience will ultimately lead to savings in insurance premiums and to lowering the manual rates established in a state for specific industries.

Inter-Association Safety Problem

Association executives conducting accident prevention programs find it convenient and instructive to

discuss problems not limited by the boundaries of their own industries.

George Miller, secretary of the Mason Contractors Association, points up this approach, regarding areas of joint responsibility: "We don't confine our interest to the specific but to a study of the general involving scaffolding, masonry saws, mechanical equipment, pallets, ladders, and other factors."

This viewpoint led to development of a series of meetings for association executives representing contractors in basic trades.

In conjunction with the National Association of Plumbing Contractors, the Council participated in a recent meeting in Cleveland that created considerable interest. Further meetings are planned. A Chicago conference last month further explored this area.

It's anticipated that this cooperative venture will establish a format for approach in other business and industrial areas where a common ground for safety concern exists.

Out-of-Plumb May Mean Out-of-Pocket

Can you think of a good reason why a contractor will stack or temporarily store a pile of concrete blocks 6 ft. high and allow the pile to lean out-of-plumb 12 ft. in that height? Well the editor can't either, but there are many good reasons why this condition shouldn't be allowed to exist on any job.

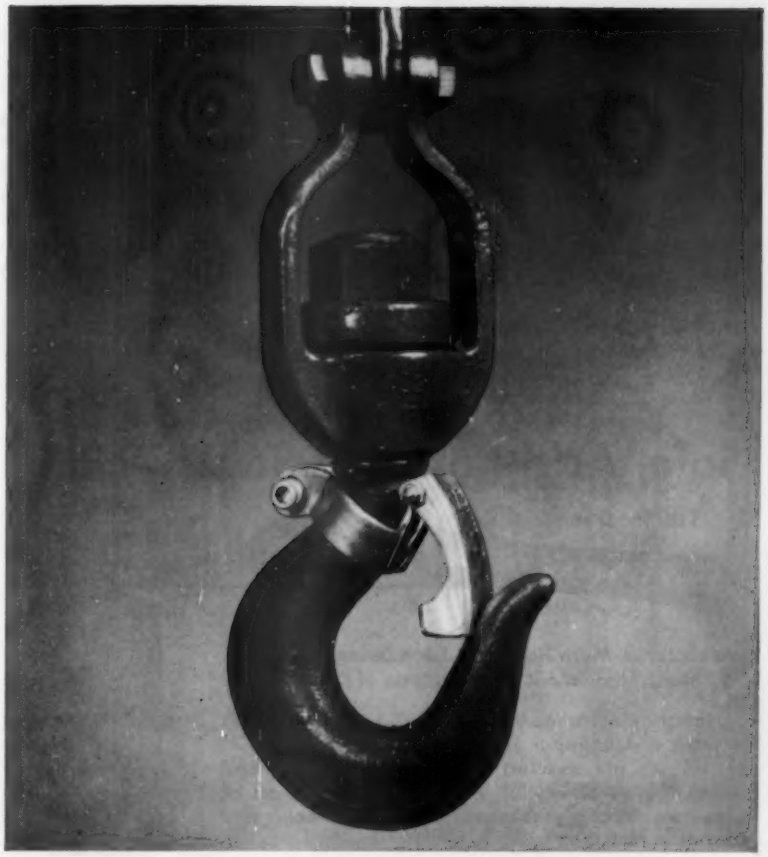
A boomerang is an unusual device that has a peculiar tendency to return to you, once it leaves you in its graceful orbit. A pile of concrete block, once it topples over, will never return to its original position.

True, the top of the pile, once it starts to fall, will follow a circular path and cover nearly a quarter of a circle until it hits the ground.

That same unstable pile may crush anything in the danger area 6 feet or more away from the pile on the leaning side.

Kids have no sense of danger in a case like this! In fact, they'd much rather play around the construction job than play with a boomerang.

These pictures of the two boys could be captioned "How To Keep From Growing Old!" It's going to take more than hard hats or a life-



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saver to give these kids the protection they'll need, if they continue to play around this job or jobs like it.

While the pile of leaning concrete blocks is totally unlike a boomerang, because once it leaves its unstable position it can never return, the trouble that a falling pile of blocks can bring to any contractor can be likened to a boomerang. If children are injured on your job, legal action that soon will result may be the boomerang that will convince you:

Out-of-Plumb may mean Out-of-Pocket

Aside from selfish monetary interests emphasized in this story, it's felt that most reputable contractors consider humanitarian aspects on their jobs as one way of eliminating "attractive nuisance" situations that can cause real trouble, resulting in monetary loss of much more than the profit involved on one job.

This article, prepared by Robert L. Moore of Lumberman's Mutual Casualty Company and NSC Construction Section, recently appeared in *The Mason Contractor News*. This is an effective method of reaching the individual contractor with a reminder of his safety responsibility.



This 6-ft.-high pile is out of plumb 12 in. in 6 ft. It looks like a new world's record in plain carelessness, doesn't it?



Kids love to play near construction sites. These two trusting tykes don't give this pile of leaning concrete blocks a thought.



It will take more than hard hats or a life-preserver to protect the boys, if this poorly balanced stack of blocks topples.

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Pamphlet Brings Home Off-Job Facts of Life to Workers

Several months ago all the workers at Western Electric Company's Greensboro, N. C., shops received a pamphlet that pointed up the hazards of off-job life.

The green and brown publication



explained that the firm's employees maintained a perfect record at the plant, while suffering 24 disabling injuries away from the job in 1959, including one death. And in the first three months of 1960 nine workers suffered disabling injuries of the off-job type.

The final paragraphs of this literature sum up management's attitude:

"If you will practice the safe way of doing things at all times, you will soon do them automatically. They will become habits like blowing out a match after you've used it. That's a safety habit—one you've probably had most of your life.

"Aside from the physical pain, accidents cost you plenty and if an injury results in your having a lowered income, your family will suffer just as much as you.

"So drive safely. Make your home safe. Exercise and play safely. Work safely to be safe and sound 24 hours a day."

The publication was written and distributed by the firm's Central Safety Council.

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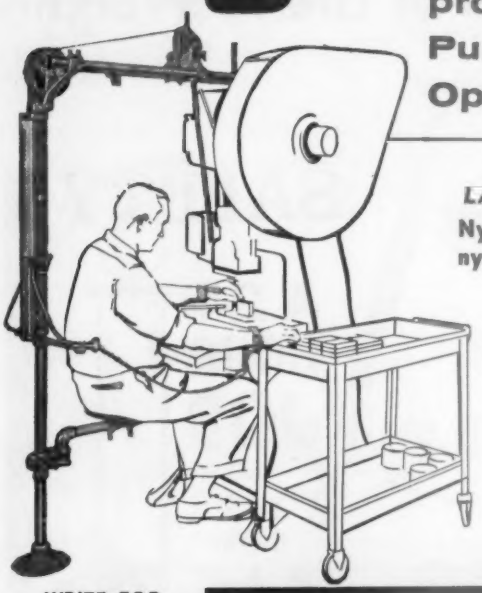


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Safety Is Many Things

Safety is not a crutch; it is a shield. Safety is not only a pair of steel-toed safety shoes but also the common-sense habit of working in those safety shoes.

Safety is not a contest between departments or individuals. It is a contest waged by each individual against the ambulance, the hospital, and death itself.

Safety is not a sleeping pill to make us forget the responsibility to our own life and limb, and the life and limb of the other fellow.

Safety is not the safety supervisor who rides the circuit to see how safety is being treated. It is thinking and acting safely, regardless of whether or not a safety department representative ever comes around.

Safety is not a set of statistics, for statistics are only a gauge, measuring the degree of our safety performance.

Safety is not something we can leave to the other fellow to do something about. It is a combination of all these things and more. But safety is not going to be worth much unless its banners are held high by everyone, from the company executive to the man who spikes a rail, runs a locomotive, or pushes a pencil.

If safety is to cut deeply into the unnecessary funerals, the wheel chairs, the tears and sorrow, and the terrifically high cost of accidents, injury and death, then it must become a religion for all those who face even the simplest of hazards.

The Texaco Digest

Not So Safe at Home

Home fires, which killed 6,000 persons in 1959, are one of the nation's chief accidental killers.

Fires, burns, and fatalities associated with fires were the principal death-dealer in the home to persons 1-14 and 25-64 years of age.

Mechanical suffocation (main type: bedclothes smothering the victim) was the No. 1 home killer of infants under 1 year, firearms to persons 15-24, and falls to persons 65 and over.

From *Accident Facts*—1960 Edition.

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THE SAFETY LIBRARY

Reviews of books, pamphlets and periodical articles of interest to safety men

By LOIS ZEARING, Librarian, NSC

Air Pollution Manual Part I—Evaluation

Air Pollution Manual—Part I—Evaluation. By American Industrial Hygiene Association. 1960. 194pp. American Industrial Hygiene Association, 14125 Prevost, Detroit. $8.50.

THIS BOOK is the first of two volumes on air pollution. Volume II will cover problems of air pollution control.

The initial volume was written by 13 experts in the field of industrial hygiene and air pollution with disciplines in engineering, chemistry, toxicology, physics, meteorology, and other specialties.

Increasing concern and activity in air pollution control in numerous communities in the United States, and serious consideration given by them to the passage of laws, creates need for knowledge of the nature of pollutants, quantities present in the atmosphere, and their effects, if any.

In some plants, air pollution control may be within the realm of responsibility of the safety engineer. We recommend he refer to this book for information required to make an intelligent appraisal of his air pollution problems. Each chapter gives a practical treatment of the subject matter, with numerous references to sources of information.

Chapter 1, Legislative and Administrative Procedures, gives the present

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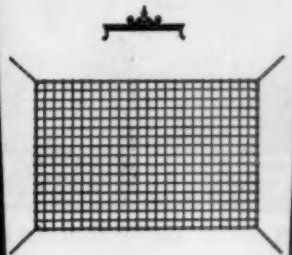


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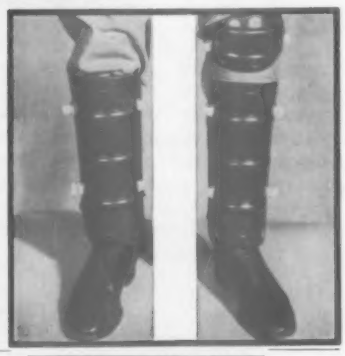
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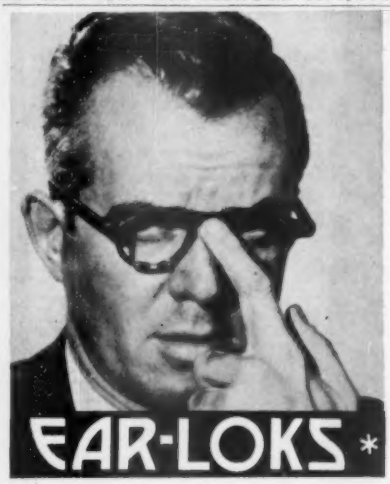
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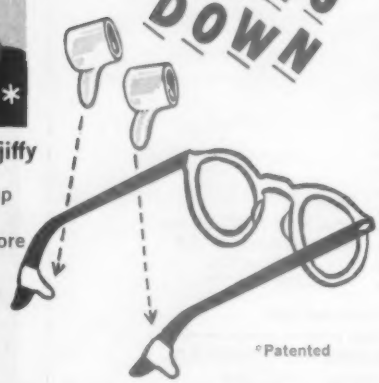


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status of air pollution legislation in the United States and various territories. There is also discussion of the role which smaller governmental units—villages, towns, cities, counties, and districts—have in the control of their own air pollution problems.

Community Relations is the title of Chapter 2. Factors that should be considered in new plant construction are choice of plant site, raw materials, and extent to which air pollution must be controlled at the selected site to keep a plant from becoming involved in damage suits or violating local ordinances.

Plant emission should be evaluated and a concurrent study made of the meteorology and topography of the area at existing plants. Complaints should be thoroughly investigated and the facts presented to those initiating complaints.

Chapter 3 comments on the concentration of atmospheric particulate matter in selected urban and nonurban locations obtained by the National Air Sampling Network of the United States Public Health Service.

The effect of air pollution on health is discussed in Chapter 4. A number of acute air pollution incidents are described, such as those occurring in Donora in 1948, Poza Rica in 1950, and London in 1952. This chapter also details the interplay on health of physical and physiological factors of various air pollutants.

The effect of air pollution on vegetation and farm animals and the economic effects are described in Chapters 5, 6, and 7. Complete description of sampling instrumentation for collecting particulate and gaseous matter is offered in Chapter 8, Community Air Sampling.

The complex subject of stack sampling is given such complete treatment in Chapter 9 that the reader with adequate scientific training can approach a problem in a practical and efficient manner.

Analyses of air pollutants with ample references to proven methods are given in Chapter 10 on Chemical Procedures.

Malodor is more noticeable by the public than any other manifestation of air pollution. The concept of odor, its measurement and control, are excellently described in Chapter 11.

Problems associated with radioactive air pollution, fallout, and use of radioactive material as tracers in air pollution studies are listed in Chapter 12.

The influence of meteorological factors on air pollution and a description of instrumentation used in measurement of weather elements, such as wind, temperature change,

precipitation, water vapor, are mentioned in Chapter 13.

This publication contains 646 specific references, 33 tables, and 82 figures or illustrations.

J. T. SIEDLECKI

Health Service

A Guide to Records for Health Services in Small Industries. Published by the American Conference of Governmental Hygienists, c/o Occupational Health Field Headquarters, Public Health Service, U. S. Department of Health, Education and Welfare, 1014 Broadway, Cincinnati 2, Ohio. 32 pp. $1.

THIS MANUAL, consisting of 32 pages of text and illustrated forms, was developed in response to a need for specific guidelines on health records in industry. It is especially designed to assist in developing or improving record systems for employee health services in small industrial or business establishments.

L. C. SMITH

BOOKS AND PAMPHLETS

Chemicals

Determining the Safety Characteristics of Unsymmetrical Dimethylhydrazine. 1960. 12 pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigation 5635).

Mines

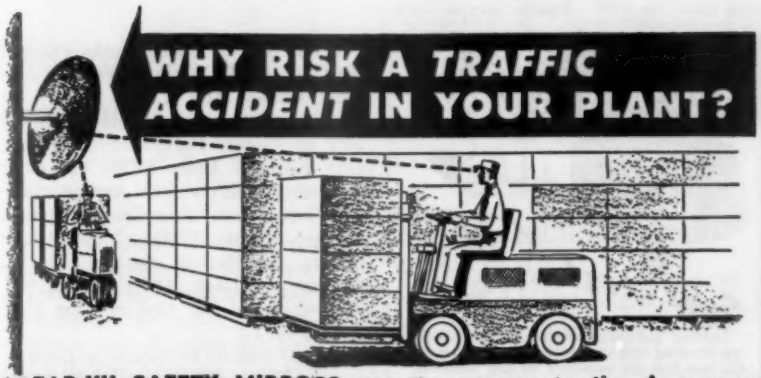
Controlling Mine Fires With High-Expansion Foam. 1960. 28pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigation 5632).

Extracting Final Stump in Pillars and Pillar Lifts with Continuous Miners. 1960. 13pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigation 5631).

Flammability Limits of Methane and Ethane in Chlorine at Ambient and Elevated Temperatures and Pressures. 1960. 6pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigation 5610) Free.

Hazards of Cutoff Explosive Charges in Multiple Blasting of Coal. 1960. 23pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigation 5613) Free.

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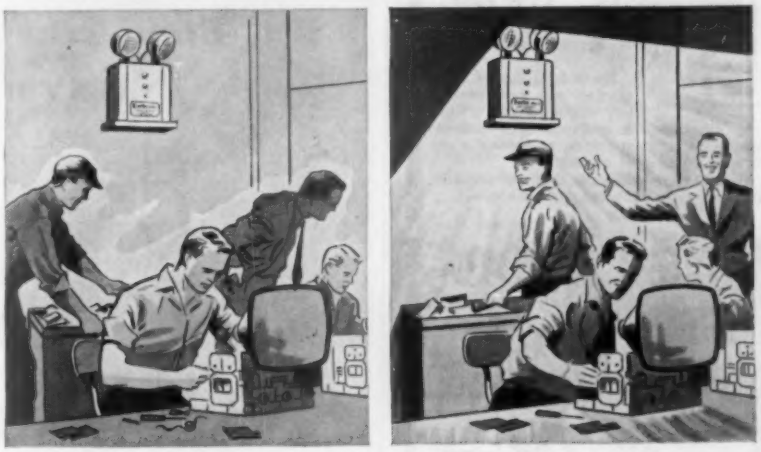
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S. M. R. E. Bibliography. Compiled by E. B. Smith. 2nd edition. 1960. Preface 8pp. 177pp. Safety in Mines Research Establishment, Ministry of Power, Portabello St., Sheffield, England. Price $2.58. (17s6d).

Tentative Safety Recommendations for Field Mixed Ammonium Nitrate Blasting Agents. 1960. 12 pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Information Circular 7988).

Use of Sonic Techniques in Exploring Coal-Mine Roof Strata: A Progress Report. 1960. 15pp. Publications Distribution Section, U. S. Bureau of Mines, 4800 Forbes St., Pittsburgh 13, Pa. (Report of Investigation 5617) Free.

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Accidents

"The Anatomy of an Accident." Albert L. Chapman. *Public Health Reports*. July 1960. Pp. 630-632.

Chemicals

"Who Knows What About Chemical Safety. Part II." H. H. Fawcett. *Industrial and Engineering Chemistry*. August 1960. Pp. 75A-76A.

Construction

"Educating for Safety in Building Work." H. C. Turner, Jr. *The Constructor*. August 1960. Pp. 49-50.

Courses

"An Appraisal of the Lateiner Accident Control for Supervision Course." C. Coveney. *Pulp and Paper Magazine of Canada*. July 1960. Pp. 196, 198-200-201.

Fire Protection

"The Chemical Aspects of Fire Extinguishment." Arthur B. Guise. *Quarterly of the National Fire Protection Association*. April 1960. Pp. 330-336.

"Flying Tankers Set for Fire Season." *Pulp & Paper*. July 1960. Pp. 90-91.

"Fire Reports Show Refrigeration Greatest Single Cause." Leo Kowal. *Refrigeration Service and Contracting*. June 1960. Pp. 24-38.

"Giant Flying Boats Poised to Flood B. C. Fires With 7,000-Gallon Water Drops Before Excessive Damage Is Caused." *The Timberman*. June 1960. Pp. 38-39, 79.

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To Users of NSC Safetygraph, "How to Control Bleeding"

THE TEXT for page 11 of the NSC Safetygraph No. 26, How to Control Bleeding, has been revised to conform with the latest recommendations of the Medical Advisory Committee of the Council's Industrial Conference. The revised page now suggests that tourniquets be loosened for a few seconds at 10-minute intervals (except in the case of a severed limb or artery) and should be retightened only if bleeding persists or recurs.

If you wish to insert the revised sheet in your Safetygraph No. 26 just send 50¢, to cover handling and mailing, with your request or order to: National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

"Los Angeles Strives to Maintain Airport Safety Record." *Fire Engineering.* June 1960. Pp. 484-485, 509-513, 527.

Gases

"Cryogenics Handling and Storage." Ray Fellom, Jr. *Pacific Factory.* July 1960. Pp. 25-28.

Health Hazards

"The Control of Beryllium Hazards." C. L. Lindeken and O. L. Meadors. *American Industrial Hygiene Association Journal.* June 1960. Pp. 245-251.

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"The Role of Roasted Chromite Ore in the Production of Cancer."



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Tanks

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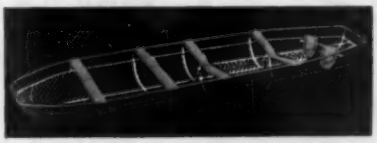
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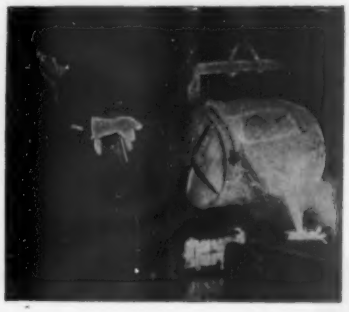
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Wastes

"Incinerator Plant: Designed to Meet Today's Waste Disposal Problems." Hermann Marnet and E. P. Street. *Plant Maintenance and Engineering.* August 1960. Pp. 34-36.

ADDRESSES OF MAGAZINES

Readers are asked to send their requests for copies of magazine articles to the publishers. The NSC Library is unable to fill such orders.

AMA Archives of Industrial Health; (See Archives of Environmental Health).

American Industrial Hygiene Association Journal, 1014 Broadway, Cincinnati 2, Ohio.

The American Journal of Nursing, 2 Park Ave., New York 16.

Archives of Environmental Health, 535 N. Dearborn St., Chicago 10.

Best's Fire and Casualty News, Alfred M. Best Co., 75 Fulton St., New York 38.

British Journal of Industrial Medicine, Tavistock Square W.C. 1, London, England.

Coal Age, 330 W. 42nd St., New York 36.

The Constructor, Associated General Contractors of America, Inc., A.G.C. Building, 1957 E St., N. W., Washington 6, D.C.

Factory, 330 W. 42nd St., New York 36.

Farm Chemicals, Ware Bros. Co., 317 N. Broad St., Philadelphia, Pa.

Fire Engineering, 305 E. 45th St., New York 17.

Hospitals, Journal of the American Hospital Association, 840 N. Lake Shore Dr., Chicago 10.

Hospital Progress, The Catholic Hospital Association, 1438 S. Grand Blvd., St. Louis 4, Mo.

Industrial and Engineering Chemistry, 1155 Sixteenth St., N. W., Washington 6, D.C.

Industrial Hygiene Journal, 1014 Broadway, Cincinnati 2, Ohio

Industrial Medicine and Surgery, P. O. Box 44306, Miami 44, Fla.

Journal of the American Medical Association, 535 N. Dearborn, Chicago 10.

The National Provisioner, 15 W. Huron St., Chicago 10.

Pacific Factory, 709 Mission St., San Francisco 3, Calif.

Plant Maintenance & Engineering, Plant Publishing Co., St. Joseph, Mich.

Public Health Reports, Public Health Service, Washington 25, D. C.

Pulp and Paper, 1791 W. Harvard St., Chicago.

Pulp and Paper Magazine of Canada, National Business Publications, Gardenville, Quebec, Canada.

Quarterly, National Fire Protection Association, 60 Batterymarch St., Boston 10.

Railway Age, Simmons-Boardman Co., Orange, Conn.

Refrigeration Service and Contracting, Nickerson & Collins Co., 433-435 N. Waller Ave., Chicago 44.

The Timberman, 519 W. Park Ave., Portland, Ore.

The Tool Engineer, 10700 Puritan Ave., Detroit 38, Mich.

What a Guard Should See En Route

The purpose of making plant security rounds after hours is not to ring clock stations. On this point all plant management will agree.

They'll probably disagree considerably, though, on just what the uniformed security guard should be doing and looking for on his tour of duty, claims the leading professional firm in this field.

Truth is that most plant security watches are performing only a fraction of their functions, according to Pinkerton's National Detective Agency, which handles thousands of security installations for business and industry.

The reason for the tour of clock stations over a prescribed route is, of course, to enable the guard to observe conditions and protect plant property, and possibly lives, by taking him on a complete tour of the premises.

But the clock he carries and the station keys that record his visits are proof only that he has traversed the route. It is in the matter of intelligent observation in a guard's performance of his rounds that many plant security watches fall down, says Pinkerton's.

Here is a list of 19 things this professional security service trains its guards to look for on every round—especially on the all-important first tour of duty. In watching for these various conditions, the modern-day "watchman" actually serves as a combination after-hours firewatch, policeman, detective, maintenance man, and general housekeeper.

1. Open windows.
2. Unlocked doors and gates.
3. Unnecessary lights.
4. Electrical equipment or appliances left operating.
5. Leaks of steam, water, oil.
6. Blocked aisles.
7. Blocked fire extinguishers, hose.
8. Blocked fire doors.
9. Evidence of any equipment running hot or overheating.
10. Company products, equipment, or material apparently hidden or set aside under suspicious circumstances.
11. Evidence of illegal entry or trespass.
12. Uncovered containers of solvents.
13. Oily rags.
14. Evidence of smoking in nonsmoking areas.
15. Roof leaks.
16. Unusual sounds.
17. Closed sprinkler valves.
18. Unusual odors.
19. Any unsafe condition.



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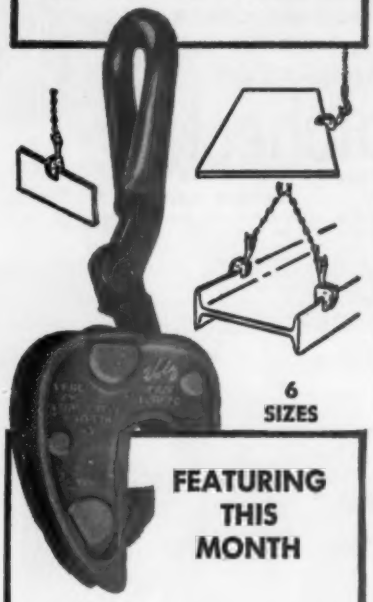
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PERSONALS

News of people in safety and related activities

DAVID B. RENEGAR has been appointed special services supervisor for Chemstrand Research Center, Inc., Durham, N.C.

Renegar had been safety supervisor at the Chemstrand Corporation's facilities at Decatur, Ala., since 1952. Supervision of safety programs will continue to be included among responsibilities of his new position in Chemstrand Research Center's new multi-million dollar facilities nearing completion in North Carolina's Research Triangle Park.

During Renegar's service in Decatur, Chemstrand units received many safety citations, including two presentations of the National Safety Council's Award of Honor.

JAMES A. DICKLOW has been appointed safety engineer in the Industrial Hygiene and Safety Division of Argonne National Laboratory, Argonne, Ill. He will work in all phases of accident prevention at the laboratory.

He received a bachelor of science degree in industrial engineering from Northeastern University, Boston, in 1943. For 13 years Dicklow has been a senior safety engineer with the Liberty Mutual Insurance Co. in Peoria, Ill.

W. H. TEEGARDEN, a veteran employee of Gulf Oil Corporation for 27 years, retired September 1. At the time of his retirement he was supervisor of accident prevention for the Houston Sales Division.

Mr. Teegarden joined Gulf in 1933 as a salesman and shortly afterwards was transferred to Tulsa where he was assigned as jobber salesman and later as district manager. He remained there until 1951 when he was moved to Houston as superintendent of operations. He was appointed supervisor of accident prevention in 1955.

He has been active in the Texas

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Council of Safety Supervisors and a director of the Texas Safety Association. He held the rank of lieutenant-colonel during World War II and at one time was commanding officer of the 2697th Air Reserve Center in Houston.

ALEXANDER S. BROKENSHIRE has been named safety coordinator for the bleached kraft pulp mill of Celgar, Ltd., to be completed early in 1961 at Castlegar, B. C.

Mr. Brokenshire has been an employee of Consolidated Mining and Smelting Company of Canada, Ltd., for the past 20 years and for seven years has been in the company's personnel department at Trail, B. C. Since 1956 he has been an alderman for Trail.

LAWRENCE PAVLINSKI of the Wisconsin Motor Vehicle Department has been appointed assistant executive director of the Wisconsin Council of Safety, Madison. He has been with the Enforcement Division of the Motor Vehicle Department for the past seven years and most recently was lieutenant in charge of the Eau Claire division.

As assistant executive director, Mr. Pavlinski will be the council's staff specialist in traffic safety and will assist in general administration and field service.

CLIFFORD L. SHECKLER of Raritan, N.J., has been appointed manager of the industrial health program, Johns-Manville Corporation, New York, it was announced today by C. W. Hite, vice-president for industrial relations. He succeeds H. M. JACKSON, who has been promoted to the position of director of training.

In his new position, Mr. Sheckler will have responsibility for coordinating the company's health, accident prevention, workmen's compensation, and industrial health programs.

A native of Lehighton, Pa., Mr. Sheckler began his career with Johns-Manville in 1936 in the Plant Engineering Department at the Manville, N. J., plant. He was promoted to safety engineer in 1952 and named supervisor of safety and industrial hygiene in 1955.

An engineering graduate of Rut-

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Lee

gers University, Mr. Sheckler has long been active in professional health and safety organizations. He is a member of the New Jersey Chapter of the American Society of Safety Engineers, the New Jersey Section of the American Industrial Hygiene Association, and the New Jersey Industrial Safety Committee.

THOMAS B. WOODY has joined the Chemstrand Corporation at the Decatur, Ala., Acrilan acrylic fiber plant as safety supervisor.

Woody joined Chemstrand after serving as safety director for Murray-Ohio Manufacturing Co., Lawrenceburg, Tenn., and for Continental Carbon Co., Amarillo, Tex. He also served with Hardware Mutuals Insurance Co., Dallas, as a safety engineer.

He is a native of Abilene, Tex., and was graduated from North Texas State College with a bachelor of science degree. He obtained a master of arts degree from New York University.

He is a member of the American Society of Safety Engineers and of Veterans of Safety.

J. T. MONAHAN of American Optical Company, Southbridge, Mass., was re-elected as president of the Industrial Safety Equipment Association, Inc., at its Annual Meeting at Greensboro, N.C., June 21-24.

Elected also at the meeting were FRED GUILBERT, Chicago Eye Shield Company, Chicago, vice-president; DRAPER ALLEN, Arcadia Manufacturing Company, Birmingham, Mich. and THOMAS JOHNSON, Welsh Manufacturing Company, Providence, R. I., as trustees.

D. E. HOUSTON, Safety First Supply Company, Pittsburgh, Pa., and GORDON P. ST. CLAIR, Medical Supply Company, Rockford, Ill., carry over as members of the board, while F. R. DAVIS, JR., Davis Emergency Equipment Co., Inc., Newark, N. J., Junior Past President, continues as a member of the board for another year.

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OBITUARY

HUGH A. PTOLEMY

HUGH A. PTOLEMY, retired safety supervisor for the Public Service Company of Northern Illinois, died August 31 in Bethany Hospital, Chicago. He was 76 years old. He retired in 1952 after 42 years of service, including 25 in the safety post.

Mr. Ptolemy had been an officer of the Public Utilities Section of the National Safety Council and the Greater Chicago Safety Council. Shortly before his retirement he had been presented with the National Safety Council's Award of Merit for "exceptional service to the cause of safety."

Surviving are his widow, four daughters, a stepdaughter, and four grandchildren.

THROUGH BRITISH EYES

By CHRISTINA ALLEN

Mrs. Allen, who holds M.A. degrees from the Universities of Oxford and Birmingham, has had many years of experience in dealing with women in British industry. The accompanying article presents some of her observations on visits to manufacturing plants in the U.S.A., with some thought-provoking comment on women in industry.

"ISN'T THERE a fearful risk that she'll forget? . . . What would happen if she starts working the machine again after a break and doesn't hitch on those contraptions?"

I asked those questions in an immaculate, clinically hygienic workshop.

A visitor from the United Kingdom to American industrial plants, I watched with fascinated horror the girls operating drilling machines and other repetitive automatic mechanisms that to my British eyes looked hideously unguarded. The girls wore what to my guard-the-machine-not-the-worker vision seemed like medieval accoutrements—leather thongs that gripped the wrists and served, if the sinister need arose, to snatch frantically out of danger, the slim female hands.

"You really mean the operatives have to put on those leather affairs themselves?" I asked astonished. After years of attempting by bribery, corruption, and what-have-you to persuade English lasses to wear protective hair coverings when operating machines that have spindles and the like, I had a deep-rooted belief that the donning of the protective kit was more honoured in the breach than in the observance.

My guide, the general manager of one plant (the incident was repeated in 20 factories) laughed.

"Of course they wear them," he replied. "Look, they're all fixed up."

Sure, the accident frequency and severity rates were little different from those we notch up.

"Over here, we put the chief onus on the worker," they said and delighted me with evidence that the worker reacts to the lively, gay, and civilized spate [Br: flood] of exhortation, from the witty posters to the daily bring-everybody-into-the-act bulletins about the accident position.

"We reckon what's needed is to make everyone accept the responsibility of safe working," they said, and enchanted me with signs of that "I'm as good as the boss attitude," so that the shop-floor camaraderies stretched out to greet my top level, high echelon guide, and me, trained in the "hushed voices in the presence of the top brass" English manner.

"But isn't the responsibility too great?" I wondered. I still wonder.

I put it on record: where women are concerned, after watching those American operators using automated machinery, girt about on wrists and arms with snatch thongs, I believe that the better safety philosophy is to guard the job.

You've seen a teen-age girl with half her scalp torn out by the spindle of a drill? You've recoiled from the sight of a girl's hand

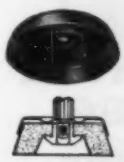
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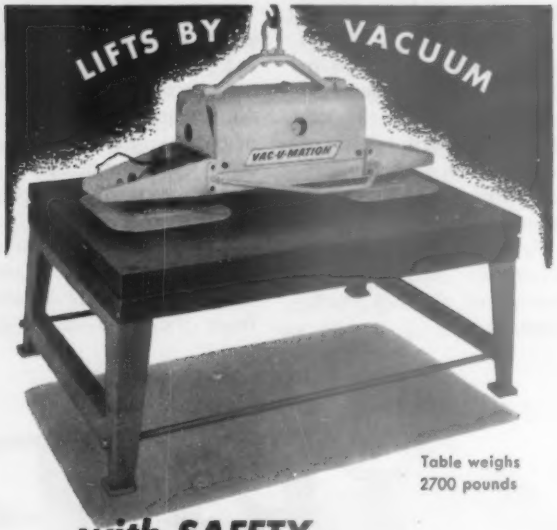


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neatly amputated of four fingers by the guillotine of a press?

I have; they're not pretty sights.

I put it down as a challenge that where female workers are concerned there should be no truck with this "onus on the employee" approach. There should be only complete and maximally efficient guarding of the job which asks nothing in the way of cooperation from the worker beyond acceptance that management knows best and that management will exercise this stringent discipline in the cause of individual safety.

"Don't the girls ever forget to slip on the wrist bands?" I asked. Of course they do. They get away with it and no accident happens.

Is that good enough, though? Guarding machines is now more or less engineering child's play, and as built-in safety becomes the norm in machine design, it becomes possible to approach infallibility. The human element is vastly fallible, and the distaff side, industrially and also in the general work habit, is especially so.

Look at it this way. Women in the factory do a fine job, but they have little interest in the job *qua* job as men have. Show a male the inside of a machine and he is entranced, absorbed. A female operator is much more concerned with the domestic background; whether the cupboards are adequate, the light is right and the shop comfortable; with the social element; whether the foreman is a sound chap and whether the other girls are a nice lot.

Where women are concerned, safety propaganda is rather like water on a duck's back—not much sticks. Not one female worker in a thousand would want to sit around at a safety committee meeting. If



"Now about your cute safety posters . . ."

she did, she'd soon get the chatter around to talking about some domestic issue, such as those worn-down work benches, which are not items for really effective accident prevention committees at all.

Not a woman in 500 cares tuppence whether magnesium has an explosion hazard in dust form, or whether photoelectric methods are applicable to this or that machine. Like as not, when the elaborate induction process is under way with a slice for safety, the attention of the female newcomers will be wandering to the line of the canteen or the color scheme of the cloakroom and not to the need for a local exhaust system over a solvent tank.

There's another point of major import. Women are notorious risk takers. They take over from the home into the factory habits that are a mixture of derring-do, courage, and downright stupidity. In the home they will pick up hot bars from the oven, use knives with broken handles, carry loads that obscure their view on stairs, and try to reach heights that are balance busters.

They're the same in the factory. Those girls of mine on that line of drilling machines knew well enough the hazards of trapped hair. They knew that a head covering that blankets the bouffant hair style was imperative for absolute hazard scotching. They even chose their own headwear from a set of patterns styled in *haute couture* consciousness.

Yet they discarded the caps in a flash if whim dictated it. Look at the casebooks of a works surgery for minor injuries that rocket the statistics; for incised fingers—of girls who had a free glove issue when handling sharp-edged pieces for frazing but didn't use them unless the disciplinary whip lashed.

Where safety in the factory is concerned, women are radically different from men. They need a fundamentally different approach.

"But those frilly pinafores they wear," I said, surprised, watching the colorful, varied scene, every girl in a different and often scanty "pinny."

"Hi ya, Bill!" one of them called out to my guide, a big shot of a large plant in the Middle West. I

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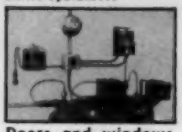
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grinned at the easy, happy, uninhibited attitude so different from the parallel occasion of a visitor touring with the gaffer [Br: overseer or foreman] a plant in my country. But those aprons . . . .

"Aren't some of them unsafe?" I asked, sticking my neck out, for I remembered how easily a straying belt is caught in any kind of protrusion, from the machine itself to a handle of a packing case. "You don't insist on a standard overall, belt-free, fastened in such a way that it could be stripped off instantly in case of burns?"

My guide laughed. "Over here I guess we go in for individuality," he countered. And indeed there was evidence on the plant bulletin boards of individual approach. My personal history was blazoned up so that everybody knew who I was and beamed genially upon me. A delightful gesture!

"Is there no risk that these casually chosen overalls will create a danger," I asked. I thought mine was a voice crying in the wilderness. But I put it as a challenge that where women are concerned, there is need to have an element of discipline; to lay down even sartorial enactments that make personal whims out of court.

Generally speaking, the women won't object. They have, as experience has shown me, no objection to wearing a job uniform if it is well cut and of attractive color. They will enjoy choosing those details.

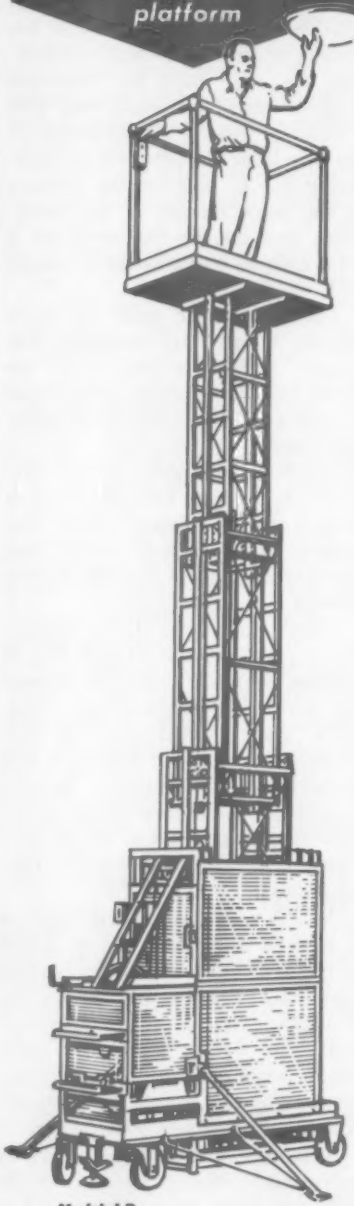
It is, in fact, my considered opinion that women in the factory like a firm platform of discipline. They don't really want the liberty and license and the invitation to come voluntarily into the act that seems



"It's a good location, but all these plants are bearing down on safety."

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to underlie so much of the safety approach I saw across that stimulating, exciting, vital country that is America.

Feminine psychology has had a lot of study in many spheres but not, I suggest, in industrial safety. Too often the feminine element is strung along in the whole. What seems necessary is a two-directional slant on this safety business—one for men, the other for women. Men more than women will play for safety in perhaps one sphere only—in the factory. They can grasp and are interested in its minutiae. The girls have a big stake of interest in the plant to which they have elected to devote some seven hours or so a day, but their interest drops sharply over safety principles. They ought not perhaps be compelled to carry the load of responsibility that is not shouldered with their full comprehension and zest.

If the bring-everybody-into-the-act theme must be the philosophy, then the girls should be cast only for minor, one-line roles. They are observers rather than participants. For them, safety should be more objective than subjective.

The wit, the delicious bombast, the bruiting, the incessant pressure of safety in those American plants delighted and entertained me. The brisk wind of accident prevention blew at gale force that was exhilarating and bracing. For the male workers it seemed more than just the job. But with the girls . . .

Those leather thongs—a bit medieval?

Besides, they must be horribly uncomfortable. A brace of shackles!

"Hasn't anyone said the things are dashed clumsy?" I asked.

Laughter echoed again.

Numbers 49 and 50 Report

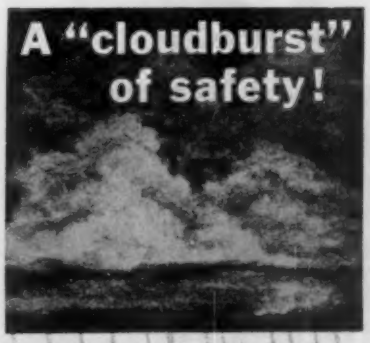
Hawaii and Alaska achieved distinctions of a different type in 1959.

Based on the number of deaths per 100,000 population, Hawaii had an accidental death rate of 29.6—lowest for any of the 50 states and the District of Columbia.

Alaska, on the other hand, had the highest number of accidental deaths per 100,000 population—135.1.

From *Accident Facts*—1960 Edition.

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1960 Home Safety Inventory

Plans for the 1960 Inventory of Home Safety Activities are well under way. As in the past, the purpose of the Inventory is to provide communities with a tool to assist them in evaluating their current home safety programming efforts and in developing more effective programs for the future. Detailed information concerning administration of the Inventory, plus pertinent questionnaire forms, will be forthcoming in the early part of October.

To date, 72 local safety organizations have indicated definite participation in the Inventory as Home Inventory Centers.

This year's Inventory will be administered primarily by such local safety councils, serving as local Inventory Centers. These organizations, assisted by local community committees, will solicit programming information from official agencies, hospitals, business and industry, safety councils and other community groups.

To achieve its primary goal as an effective tool in community home safety programming, the 1960 Inventory first seeks to ascertain an organization's present scope of activities in home accident prevention.

Completed local inventory forms will be collected by the Inventory Centers and forwarded to NSC's Home Department staff, who will review data, suggest needed areas for future programming, and arrange conferences with home safety leaders to develop a final report.



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OCCUPATIONAL HEALTH

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By J. T. SIEDLECKI
Industrial Hygienist, NSC

Toxic Properties of Synthetic Resins

"Plastics." By R. H. Wilson, M.D., and W. E. McCormick, *A.M.A. Archives of Industrial Health*, Volume 21. Pp. 536-548. June 1960.

THE AUTHORS in this article have reviewed literature concerning the toxicological properties of synthetic resins. They have included at the end of their article 114 references. In their discussion they have separated resins into general classifications. Several highlights are summarized here.

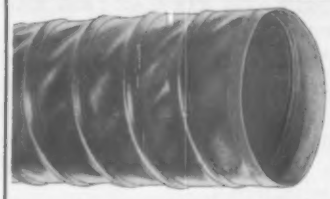
Acrylic resins have been used successfully as bone replacements, artificial eyes, and other prosthetic appliances. However, when placed in certain regions of the human body, there have been tumor formations, tissue reactions, and sepsis reported. Vapors of methyl methacrylate vapors have caused lowering of the blood pressure and systemic effects on the brain.

Alkyd resins have been used extensively in the manufacture of linoleum, surfacing paints, ignition parts, and food wrapping. These resins are capable of causing mild cases of dermatitis.

Amino (urea and melamine) resins have been used for many articles including buttons, dishes, laminated table tops, and housing for kitchen appliances. They can also be used to treat paper for food wrapping. Some amino resins pyrolyze into hydrogen cyanide and carbon monoxide. The aminoplastic resins have been found to be toxic. Many investigators have reported cases of dermatitis due to handling of this resin.

Cellulose plastic materials have been used in display packaging,

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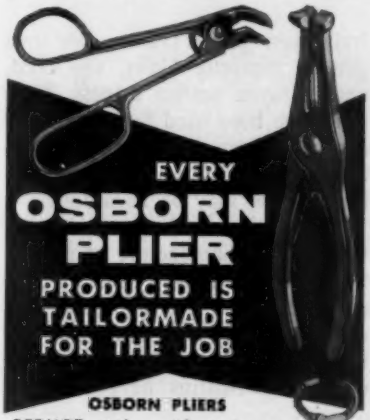
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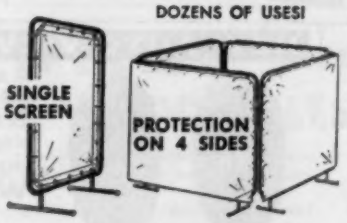
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irrigation pipe, frames for eye glasses, cigarette filters, tire cord, and in rayon acetate textiles. They also have been used for food packaging. Externally, these plastics rarely produce dermatitis. However, internal use may be hazardous.

Coumarone—indene resins are used in the manufacture of asphalt floor tiles, aluminum paints, waterproof coatings, printing inks, and chewing gum. This is a relatively non-toxic variety of resin, though cases of dermatitis have been reported among workers handling these resins.

Epoxy resins are used in corrosion resistant surface coatings, molding compounds, castings, laminating or reinforcing plastics, in capsulating electronic circuits, printed circuit backing and adhesives. Resins have also been used as adhesives for metal-to-metal bonding. The curing agents using these resins have been the primary cause of dermatitis to workers exposed.

Fluorocarbons are used in the manufacture of pump diaphragms, chemical tubing, high temperature installation, coating of molds and bread pans, and gasket materials. These compounds are inert and non-toxic, but toxic decomposition products may be produced. Inhalation of Teflon dust may cause an effect resembling metal fume fever.

Nylon has been used extensively in the manufacture of gears, slide fasteners, combs, tumblers, tire cords, tennis rackets, strings, surgical suture materials, catheters, tooth brush bristles, and textiles. There have been very few cases of contact dermatitis reported due to the use of nylon.

Phenolic resins have been used in the manufacture of telephone hand sets, electrical insulation, radio-TV cabinets, varnish, shell molding, dials, grinding wheels, plywood, surgical braces, and other external surgical prosthetic devices. The phenolics have been found to be inert and non-toxic. However, workers exposed to these resins during the manufacturing processes have developed severe dermatoses.

Polyethylene plastic has been used in the manufacture of squeezable bottles, semi-rigid kitchenware, packaging materials, coaxial cables, surgical tubing, cartilage and bone substitutes, and surgical repair materials. This plastic was found to be perfectly safe, non-toxic, and inert material.

Polyester resins are used in the manufacture of reinforced plastic for automobile bodies, boats, and translucent panels and Dacron textiles. They are relatively inert, nontoxic materials.

Silicones have been used for insulation, generator coils, auto polishes, waterproof coatings, silicone rubber, circuit breakers, needles, syringes, tubing, and in ointment bases. Although almost physiologically inert and non-toxic, they have caused transitory conjunctival irritation when introduced in the eye, but no corneal damage.

Polystyrene resins are used in the manufacture of kitchen housewares, refrigerator parts, food packaging, toys, novelties, wall tiles, and light fixtures. These resins present no health hazard from oral ingestion or skin contacts, being inert and non-

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toxic. Some hazards have been encountered in its manufacture, especially from ethylbenzine.

Vinyl resins are used in the manufacture of floor tiling, packaging film, rainwear, toys, upholstery material, pipe and pipe fittings, valves, electrical insulations, sponge, machine and structural parts, metal and fabric coatings, plastic blood transfusion equipment, and anatomical repair film. Polyvinyl pyrrolidone (PVP) is non-toxic and can be used in the human body. Polyvinyl chloride (PVC) has caused some slight skin irritation to workers in the manufacturing process.

Polyurethanes may be used in the manufacture of adhesives, plastics, rigid or elastic foams, or synthetic rubber. The finished products are inert chemically and present no toxic hazard. However, during manufacture severe industrial health hazards may occur because of the isocyanates. This type of chemical is extremely hazardous by inhalation.

Toxicology of Organometallic Compound

"The Toxicology of Organometallic Compound." By C. E. Lewis, M.D., D.Sc., *Journal of Occupational Medicine*, Volume 2, pp 183-187, April 1960; pp 225-228, May 1960.

THE AUTHOR gives an excellent review of the toxicology of organometallic compounds. There is very little information on the toxicological properties of these compounds, and yet materials of this class of compounds are finding increasing use in industry. Many of these compounds are very reactive upon contact with air, or water, and they will decompose with sufficient violence to either explode or burst into flames. This is especially true of the organometallic compounds of the alkali metals.

In handling these compounds a three-fold problem is present: first, the toxicity of the compound itself; second, the hazards associated with fire and explosions resulting from spontaneous decomposition; and third, the toxic efforts of the products of decomposition.

The more stable organometallic compounds such as tetraethyl lead may be absorbed into the body through contact with the skin. The systems of intoxication produced by inorganic lead compounds are not identical. With inorganic lead in adults gastrointestinal symptoms predominate, followed by some neuromuscular disorders.

With tetraethyl lead exposures, symptoms are of psychic derangement, including irritability and personality changes. With organic ar-



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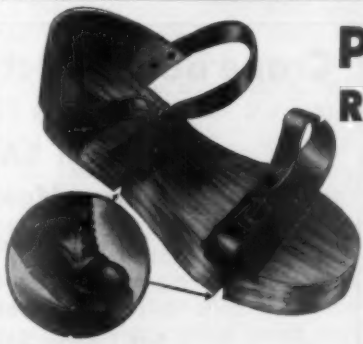
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keeps the user in perfect balance. It's convenient, comfortable and safe with 3-inch 4-ply cotton body pad, hardwood seat* that can't fall out, nylon web straps and special loops for attachment to separate life line. Balance would be retained in case of a fall on the life line, and even though the worker is unconscious he will not slip out. Safe-Hi Safety Equipment is as safe as continuing research and a lifetime of experience can make it. For complete information on Safe-Hi Bo's'n's Swings, Belts, Lanyards, Shock Absorbers, Ladder Shoes...write for free catalog. R 0-3

*Optional at extra cost.

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senical compounds, we also have a qualitatively different effect than does the absorption of an equivalent amount of inorganic arsenic.

The author also discusses the cyclopentadienyl compounds. An example of this is ferrocene, which is reported to reduce carbon deposition and smoke formation when added to fuel oil. Another type of compound that has been of interest is a manganese compound, used as an anti-knock agent. There is practically no information in the literature on the toxicity of the cyclopentadienyl compounds.

The metal carbonyls are combinations involving transitional metals and carbon monoxide. An example of this type of compound is nickel carbonyl. Inhalation of this substance in toxic quantities is followed by headache, vomiting, nausea, and epigastric pain.

The toxic hazards of most of these metallic compounds are less important than the safety aspects in handling and transporting. Since many of the compounds oxidize violently upon contact with air, or hydrolyze in water, it is necessary to handle them under dry nitrogen or another inert dry atmosphere.

The disposal of some of these compounds is also a problem. The author suggests the following:

"Non-volatile and non-reactive compounds may be disposed of by boiling small (milligram) quantities of them in a hood with nitric acid (alkyl mercury compounds). Larger quantities of reactive compounds, such as the alkyl compounds of groups I and II (periodic table) may be treated with alcohol, preferably alcohol diluted with a hydrocarbon solvent and burned in an isolated disposal burning area.

"Compounds which are highly volatile, especially if they are toxic or spontaneously inflammable pose the greatest problem. A suggested method for disposing of these compounds is to remove the container to a remote spot out of doors and from a safe distance puncture it with a rifle bullet."

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Manners and Safety At the Supermarket

Wherever people gather in large numbers, as at supermarkets, some code of conduct is necessary, for the protection of both customers and the store personnel. Such a code could help to prevent accidental injuries and save tempers. Women comprise most of the customers but not all of the offenders.

The following rules have been suggested by the Royal Globe Insurance Group:

1. *Shopping carts should be moved and located with full consideration for others.*

Probably the most irritating of all is the shopper who blocks traffic. In this category is the person who pushes a cart down the middle of the aisle, ignoring those who wish to pass in either direction, who parks the car crosswise and leaves it unattended while shopping elsewhere.

2. *Select top items from display arrangements and leave everything else secure.*

There are some who seem to have a malicious feeling toward the store's merchandise displays. They choose a can or a package from the bottom of the pile—and calmly move on as items go clattering to the floor for someone to fall over.

3. *If there is something on the floor which may cause a slip or a fall, pick it up or call it to the attention of a store attendant.*

4. *Don't be the cause of anything spilling on, breaking on, or otherwise making a floor hazardous.*

Mind-changers are often responsible for hazards. Included is the woman who gets something from the frozen food locker but when she gets to the other side of the store sees another item more to her liking. So the frozen package, ice cream, perhaps, gets left on a convenient shelf to thaw out and make a wet, slippery spot on the floor.

5. *Those who bring children into the store should keep them under control.*

The little darlings love to go along shopping. They get rides in the carts and fall out. They often push carts around, run into people, knock merchandise to the floor, and become nuisances. Also, they break open boxes of cookies and candy, stuff

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A Goggle For Every Industrial and Sport Need



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some into their mouths and scatter the remainder on the floor. Inconsiderate parents too often ignore these antics.

6. *Be ready for the check out clerk and make this procedure as orderly as possible.*

Checkout lines can be the scene of much irritation. There is the gal who puts her cart in line and then goes hunting for something she has just remembered. Suppose everyone did this? There are others who argue with the amount on the cash register and those who find themselves short of cash and can't make up their minds which items to leave behind. Most markets have express lines marked "six items or less." Try counting the number of full carts that get pushed into this line.

7. *Leave carts where they are least likely to do car damage.*

Most markets permit carts to be wheeled to parked cars. The shopper should at least see that the empty cart is left out of traffic lanes where it might became entangled with a car and out of parking spaces where it occupies needed space. The loan of anything obligates its return. Cars should be returned promptly to the store.

There are undoubtedly other ways in which customers can cooperate in making today's supermarkets better and more efficient centers. Every bit of food saved from damage, every extra job spared an attendant, every courteous act and every injury prevented is a definite advantage to the customer as well as to the store.

1,000th Foot Safety Award

The 1,000th Golden Shoe Club award was made recently to J. C. Hawkins, an employee of Southern Pacific Railroad, Sacramento, Calif.

The award and lifetime membership in the Golden Shoe Club given Mr. Hawkins is made to industrial workers reporting authentic cases where they have avoided foot injury by wearing safety shoes.

Safety directors and supervisors interested in applying for club memberships and award recognition may do so by writing Vincent LoDuca, executive secretary, Golden Shoe Club, 1509 Washington Ave., St. Louis 66, Mo.

Bottle Buster Removes a Hazard

Even breaking bottles is mechanized at The Pittsburgh Hilton. A bottle-breaking device saves the hotel storage space, eliminates a hazard, allows easy conformance with federal liquor laws on the disposal of bottles, and reduces trash removal charges.

Liquor bottles and other glass food and condiment containers, up



Service employee demonstrates operation of automatic bottle disposal machine at the new Pittsburgh Hilton.

to one-gallon in size, are dropped into the mouth of the unit which instantaneously breaks them into small pieces, dropping the broken glass into a container underneath. A rapidly revolving drum with "fins" of special alloy steel disintegrates the containers with a quick impact.

It is estimated that there is an 80 per cent saving in space through the use of the unit. Space in a metropolitan hotel is fabulously expensive. In addition, trash removal is charged on a "per container" fee.

The machines, which range in size from small economy models up to giant conveyor-fed units, are manufactured at the Pittsburgh plant of the Centriblast Corporation.

Create U. S. Division of Occupational Health

Strengthening of the Public Health Service's nationwide program to protect the health of American workers through creation of a new Division of Occupational Health has

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Here's low-cost accident insurance in a bag! Spread amazing SOL-SPEEDI-DRI carpet of safety on with a rake or broom...thirsty granules *pull deep deposits of oil, grease or liquid out of floor.*

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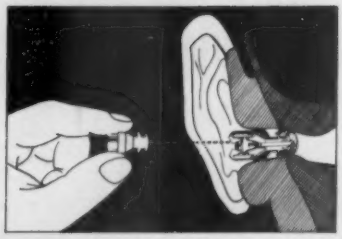
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Circle Item No. 198—Reader Service Card

been announced by the Surgeon General.

The new division, which replaces the Occupational Health Program, follows the recommendation of the Study Group on Mission and Organization of the Public Health Service, designed to place greater emphasis on all types of environmental health hazards. Dr. Harold J. Magnuson has been named chief of the new division.

To keep pace with a changing technology and multiplying hazards in the work environment, the Division will carry out an expanded research program directed at developing better techniques, materials, and equipment for use in the prevention, diagnosis, and treatment of occupational disease. Major research efforts will be intensified in toxicology and in related fields of clinical medicine, engineering, chemistry, and physics. In addition physiological and psychological factors in the work environment will come under more penetrating study.

Greater emphasis will also be focused on the training of personnel in occupational medicine and nursing and in industrial hygiene to meet the needs of this rapidly growing field. The Division will work with academic institutions and other groups to help develop the necessary professional resources.

A third area of major expansion is in state aid services, designed to support and assist official agencies in the development and operation of occupational health programs throughout the nation.

The Division will also be responsible for stimulating effective community and industrial efforts to supply occupational health services.

Research and technical services, as well as training activities, will be carried out at Cincinnati, Ohio. State aid activities, occupational health nursing consultation, and studies and consultation relating to employee health programs will be centered at the Division's administrative headquarters in Washington, D. C.

Dr. Harold J. Magnuson, chief of the new Division of Occupational Health, has directed occupational health activities of the Public Health Service for the past four years. Previously, he had served as chief of operational research for the Service's venereal disease program.

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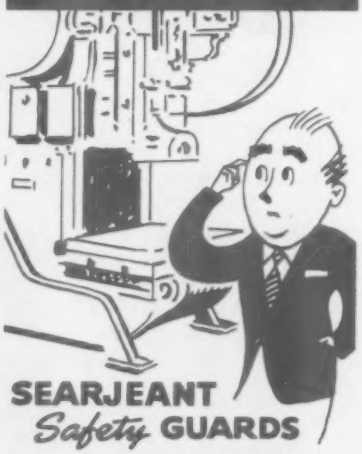
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Circle Item No. 200—Reader Service Card

Coast Guard Reports On Boat Accidents

The Coast Guard's first official tabulation of boating accidents, made under the 1958 Federal Boating Act, reveals that between March 10 and December 31, 1959, more than 2,000 accidents claimed the lives of 488 persons, injured 875 others and resulted in property damage of more than $2,500,000.

In releasing the figures, the Coast Guard pointed out that the data processing system used is based on a poll taken among all those concerned with boating safety to determine the type of information which would be most useful in the related fields of education, regulation, and enforcement.

During the period covered by the report, relatively few states were participating in the motorboat accident reporting program established by the Act, which did not become effective nationally until April 1, 1960.

There are now 38 states participating, and the Coast Guard anticipates this cooperative effort will produce more significant national statistics. Intense numbering activity in the various states since the formal approval of their systems has precluded the gathering of all facts during the height of the 1960 boating season. It's expected, that as boat numbering is completed this will permit more attention to the statistical operations and result in a higher degree of accuracy and coverage.

Most of the figures cited in the report are self-explanatory; however certain facts stand out prominently. About 46 per cent of the accidents involving drownings were capsizings; most accidents occurred during daylight hours, and involved small, open motorboats of wooden construction while being operated by mature persons (age 26 to 50) with considerable boating experience (over 500 hours). Coast Guard officials cautioned against premature conclusions being drawn from these facts without additional statistics regarding all vessels in use and comparative experience.

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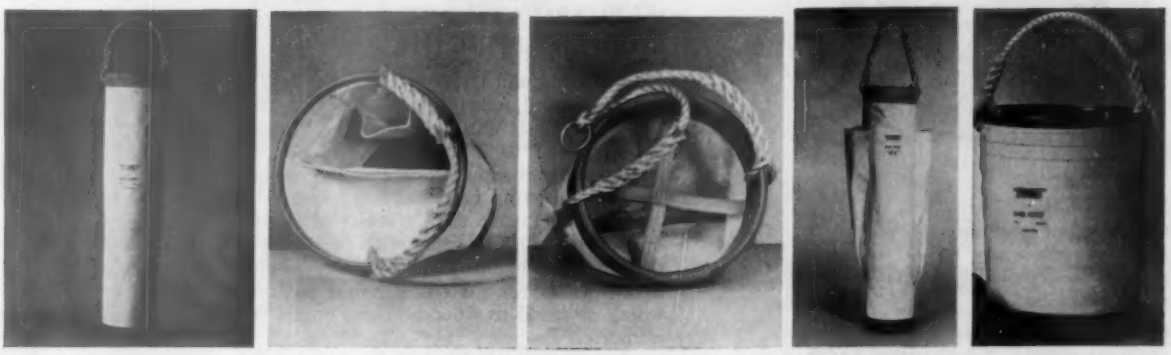
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RATES HIGHER DOWN UNDER?

HERE'S what a knowledgeable Australian has to say about the safety picture in the U. S. A. as compared with his own country. The speaker is J. D. Norgard, general manager of operations and distribution, The Broken Hill Proprietary Co., Ltd. He told delegates of the National Industrial Safety Convention at Brisbane, Queensland:

IN THE U. S. A., the reported accident rate in major industrial plants is much lower than in Australia. It is always difficult to compare figures of varying industries and to interpret them fairly. It is still more difficult to compare figures of different countries, but nevertheless, I am quite convinced that in America, with its larger industries, they have far fewer accidents than we do.

There are some reasons for that. I believe they have different methods of defining a lost-time injury. They bring men back to work earlier than employees are brought back to work in this country. An employee in America may have an injury, but as long as he can sit at a desk and write, he is brought back to work. The compensation laws of that country are less attractive than in Australia, from the viewpoint of encouraging people to stay away from work when they are injured, but despite those factors the American safety figures are particularly good, and much better than the Australian figures.

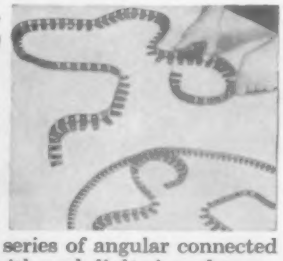
I am equally convinced that we have the ability to do better here; our facilities are as good and we have the necessary knowledge. We have not yet learned, however, just how to apply it as positively or as decisively, nor do we emphasize the basic principles of accident prevention as thoroughly as they do in America.

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Circle Item No. 204—Reader Service Card

Calendar Contest For July



The sign said, "S-Curve Ahead—Slow."
But signs didn't mean much to Joe.
With a sway and a swerve
He straightened the curve

Mrs. Margaret Ellis of the American National Red Cross, U. S. Naval Hospital, San Diego, Calif., won the $100 first prize in the National Safety Council's Safety Limerick contest with this line:

"Poor readin' and ridin' make woe!"

The contest appears monthly on the back pages of the Council's calendar. The theme for the July contest was "Signs of Life."

Second prize of $50 went to C. C. Westervelt, Fisher Body Div. No. 1, General Motors Corp., Flint, Mich. The entry was:

"Followed BENT, not the BEND, now laid LOW."

Edward A. Coleburn, Virginia Department of Highways, Richmond, Va., won third prize of $25 for this suggestion:

"Now all signs point to lifetime of woe."

The 30 winners of $5 prizes are:

Mrs. Catherine C. Smith (Individual Member), Miami, Fla.

Miss Mildred McLaughlin (Individual Member), Fort Worth, Tex.

W. J. Mrkvicka, American Brake Shoe Co., Duluth, Minn.

Bob Mueller, Kaiser Steel Corp., Fontana, Calif.

Miss Marie McKasty (Individual Member), Yaphank, N. Y.

Mrs. John Horvat, Sealtest Company, Englewood, Colo.

E. W. Wangsgaard (Individual Member), Ogden, Utah.

Don Bonner (Individual Member), Chicago.

Mrs. Theron Grove (Individual Member), LaGrange, Ga.

Mrs. Kenneth Zeller, Consumers Cooperative, Kansas City, Mo.

Miss Rachael Hillyer (Individual Member), Tulsa, Okla.

H. Phillips, Ansul Chemical Co., Marinette, Wis.



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Just speak in a *normal* voice . . . and let your compact, lightweight, "one-piece" Audio HAILER *do the work!* New "TP" (transistor-powered) model *projects* your words . . . *like a harpoon*—in a commanding "beam" . . . to anyone within a *half-mile* radius.

Yet Hailer is completely self-contained . . . NO external connections whatever . . . weighs only 5¾ lbs. . . . and runs on low-cost standard flashlight cells. Coupon below brings full details and price list.

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Fire Safety Program Material Available

The National Board of Fire Underwriters, 85 John Street, New York 38, has recently made available a brochure entitled *Your Community and Fire Safety*. This eight-page publication includes important information and ideas on this area of accident prevention.

The first part of the publication gives detailed answers to the question "How Can We Help To Make Our Community Safer From Fire?" The plan of action for those who will initiate activity in this field includes these sections:

1. Consolidate your efforts.
2. Plan a year-around campaign.
3. Avail yourself of outside help.

The first section gives data on how a fire safety committee can be organized, who should be represented on the committee, and the need for a united effort.

The second section contains an outline which indicates the opportunities that exist for year-around

community fire prevention activities. Specific projects and activities are suggested for each month. Detailed information is provided on planning and developing community activity for Fire Prevention Week.

AEC To Offer Health Physics Courses

The Atomic Energy Commission will offer intensive courses in health physics for representatives of state and local governments as a step in encouraging the states to assume control of certain radioactive materials. This instruction will provide work experience for persons who will be concerned with licensing and inspection functions in their states.

The Commission's Health and Safety Laboratory in New York will begin a 10-week course in health physics on October 17, 1960, and will repeat the course in February of 1961. Argonne National Laboratory, Argonne, Ill., expects to offer the course early in 1961.

Similar instruction will be provided at Oak Ridge, Tenn. Oak Ridge Institute of Nuclear Studies will offer a four-week course on radioisotope techniques starting January 9, 1961, and again on March 6, 1961. This will be followed by a six-week course in health physics at Oak Ridge National Laboratory beginning April 4, 1961.

There is no charge to the states for the courses, but persons attending, or their states, must pay the trainees' living expenses. Applicants should have a bachelor's degree in science or engineering, or its equivalent.

Coordination work for the courses is being done by the State-AEC Relations Branch, Office of Health and Safety, U. S. Atomic Energy Commission, Washington 25, D. C.

The AEC plans to make these health physics courses available in other parts of the country at a later date.

The Commission provides two other types of instruction for state personnel. They are:

1. A one-year course in radiation control consisting of an academic year at the University of Michigan or Harvard University followed by three months on-the-job training in AEC facilities. The Commission

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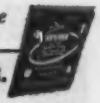
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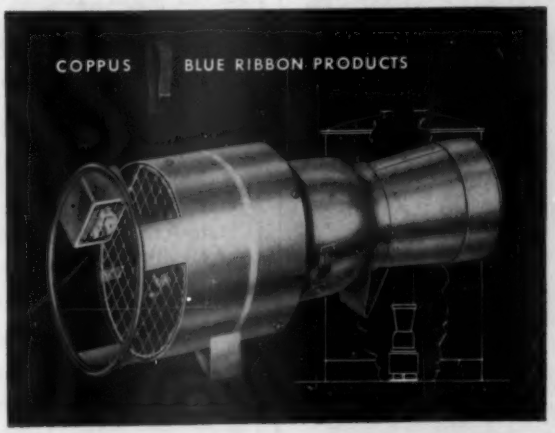
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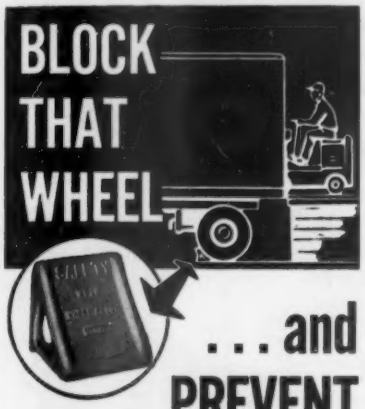
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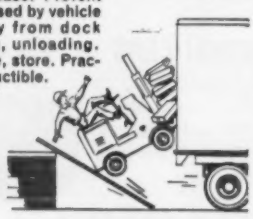
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pays tuition and all laboratory fees for students accepted for this course. Applicants should have a bachelor's degree with adequate preparation in science, preferably with mathematics through calculus. However, majors in public health who may not fully meet these academic criteria will be considered.

2. On-the-job orientation and work experience in the AEC licensing and regulation programs also are offered by the Commission to representatives of states planning assumption of the regulatory responsibility for the specified radioactive materials. This consists of two areas of instruction. The first is a period of two to three weeks of orientation of key administrative personnel of state regulatory authorities with AEC licensing, inspection, and compliance functions, both at AEC Headquarters at Germantown, Md., and at an AEC Operations Office. The second area is on-the-job work experience for technically qualified personnel for four to eight weeks in licensing functions at AEC Headquarters and in inspection functions at an AEC Operations Office.

Further information about the health physics courses may be obtained at Argonne National Laboratory, Argonne, Ill.; Atomic Energy Commission Health and Safety Laboratory, 376 Hudson Street, New York 14; Oak Ridge Institute of Nuclear Studies and the Oak Ridge National Laboratory, both at Oak Ridge, Tenn.; or from the State-AEC Relations Branch, Office of Health and Safety, U. S. Atomic Energy Commission, Washington 25, D. C.

Information about the courses at the University of Michigan and Harvard University can be obtained from Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn., or from the Commission's Office of Health and Safety, Washington 25, D. C.

Arrangements for on-the-job orientation and training may be made through the State-AEC Relations Branch, Office of Health and Safety, U. S. Atomic Energy Commission, Washington 25, D. C.

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HOW TO BE A GOOD OBSERVER

The importance of sharp observation to safety was stressed in an article published recently by *Supervisory Management* magazine.

A. Timothy Waad of the engineering department of E. I. du Pont de Nemours & Company described how the central safety committee of one "clean" plant found 69 violations of safety standards by careful observation. The plant received top rating by safety and fire inspectors in the next plant audit. Mr. Waad urges:

1. Be selective. Concentrate on the conditions you want to observe.

2. Know what to look for. The more a supervisor knows about his job and responsibilities, the better observer he will be.

3. Practice observing. Like all skills, observation improves with practice.

4. Keep an open mind. Resistance to change can be an impediment to improvement. However, a natural desire for change can spur improvement.

5. Don't be satisfied with general impressions. Most situations are more complex than they first appear.

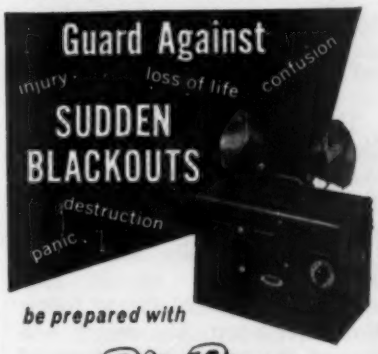
6. Guard against habit and familiarity. Try to see things as an alert outside observer might see them.

7. Record observations systematically.

8. Prepare a check list. Searching for such specifics as litter, obstructions, and flammables is much more productive than checking for an amorphous idea such as safety.

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injury loss of life confusion
SUDDEN BLACKOUTS
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Wide range of hand lamps and flares also available, including Explosion-Proof Hand Lantern, Model 287EX for use in Hazardous Locations, Class 1, Group D, Approved by Underwriters' Laboratories.

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Circle Item No. 216—Reader Service Card

1960 Congress

—From page 115

The section on religious activities will present Rabbi Jacob Weinstein of Chicago's K. A. M. Temple. He will speak about "Religion and Safety: The Influence of Religion on Family Safety," on Tuesday morning.

A panel is scheduled to follow Rabbi Weinstein. The subject will involve the moral implications of traffic safety.

Panelists will be: The Rev. Evagoras Constantinides of St. Demetrios Greek Orthodox Church, Chicago; The Rev. Dr. Vernon MacNeil, executive secretary, Illinois Council of Churches, Springfield, Ill.; Rabbi (Dr.) Louis Mann, Sinai Temple, Chicago; Robert E. Malinsky, supervisor, Driver Education, New Trier High School, Winnetka, Ill.; Milton E. Moskau, assistant to director, Traffic Court Program, American Bar Association, Chicago; James M. Slavin, chief of police, Kalamazoo, Mich.; and D. M. Statton, commissioner, Iowa Department of Public Safety, Des Moines, Iowa.

About 1500 Christmas Holiday Safety kits will be available. Each will include posters, leaflets, a booklet, and a reprint of President Eisenhower's Christmas safety message.

Among activities for women at the Congress will be a tea Wednesday afternoon October 19 at the Sheraton-Blackstone. Mercedes Hurst, public relations consultant for International Harvester, will speak.

And Miss Margaret Hickey, public affairs editor of the *Ladies Home Journal,* Philadelphia, Pa., will address the women Wednesday morning at the same hotel on "Motivation—A Means for Achieving Better Accident Prevention."

The Labor Section has scheduled "Labor's Viewpoint on Safety," comments by William F. Schnitzler, secretary-treasurer of the AFL-CIO, Washington, D. C. He will address the section Wednesday morning at the Conrad Hilton.

Col. George T. Buck, director of missile safety research for the U. S. Air Force, Norton, AFB, Calif., will speak on "Missile Safety in the U. S. Air Force" Wednesday afternoon at the Conrad Hilton. He will address the Aerospace Section, formerly the Aeronautical Industries Section.

"Buying Safer Laboratory Equipment and Apparatus" is a session slated for Wednesday morning. It will be co-sponsored by the Chemical Section, Laboratory and Pilot Plant Sub-Section, NSC, and the American Society of Safety Engineers. Presiding will be James B. Black, Jr., safety officer, National Institutes of Health, Bethesda, Md.

Participants in this program will be: Morris Brenner, supervising physicist, Diamond Ordnance Fuze Laboratories, Department of the Army, Washington, D. C.; Harry Gillerman, director or research and development, Shampaine Industries, St. Louis, Mo.; Charles G. Hain, chief, Chemical Specifications Unit, U. S. Army Chemical Corps Engineering Command, Army Chemical Center, Md.; Richard L. Lyons, sales engineer, International Equipment Co., Rockville, Md.

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Popular Model WC-7 "HEAD SNUGGER"

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Hunt Without Hazard

—From page 131

themselves lost, no matter how much they pride themselves on their woods sense and ability to determine direction in the underbrush.

These experts frequently take the wrong turn or veer off their chosen course while concentrating too hard on prey. A jog down an unfamiliar path that twists and winds. Absorption in the fun of hunting and the resulting passing of time with darkness setting in and you out there somewhere. It's easy, and it's understandable. But it can make for discomfort for the woodsman and danger for the novice.

First, let your family and friends know just where you're going . . . the approximate length of your stay . . . when you plan to return . . . any possible changes in your itinerary.

This same information might well be passed along to a game warden or country storekeeper near the hunting site, just before you embark on a trail into thick wilderness. The point, of course, is: If you do run into trouble and a search becomes necessary, a logical start can be made to find you.

If you're a loner and prefer to do your shooting solo, take the time to orient yourself before you go into the timber. If you're the least bit unsure of your directions, mark your trail, so you can backtrack, if necessary. Particularly, observe landmarks as you move along.

Besides the ever-useful compass, carry a map. Most places in the nation have been thoroughly charted. And don't make the common error of assuming the top of your map is true north. While this is often the case, look for the arrow that points north on the map.

One other check is important before heading into unfamiliar terrain. Chances are, your compass has taken a bit of a beating on your trip, as the car jarred and jolted along country roads or in your pocket while you tracked over rough ground.

These knocks can put your compass out of order. Check it by seeing if the needle always settles down to the same direction, as you try it from different angles.

Besides compass and map, you should carry a compact emergency kit with wax-dipped matches, tiny candles or some other fire kindler, single-edged razor blades in their wrappers, a small vial of antiseptics, bandaging materials, a whistle and some vitamins and water purifying tablets.

As this article suggests, hunting is a serious but satisfying sport. It's healthful, and a good hunter can bring home his quota of game each day. But carelessness can turn an outing into a tragedy. Newspaper, radio and TV accounts verify this.

If you want to get to your happy hunting ground with a big splash of publicity, disregard this article. If you want to go out on a clear day with a friend or a dog, hunt through the early morning and into the evening, stopping for chow when you get tired and returning home safely, treat these suggestions with concern. They're common sense, but they're more than just that. They're rules for survival in a high-powered hunting age.

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Model EPC16D, showing handle in space-saving stowaway position.

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Write for prices and complete information to . . .
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How to Save Hearing

—From page 123

1. Question. Why should I wear ear plugs?

Answer. Imagine yourself being suddenly cut off from the voices of your family and friends. Think of losing all the pleasure and the meaning of speech, music, the telephone, radio, television and many other things you enjoy through the miracle of hearing! It is the policy of your company to do all it can to save your hearing.

2. Question. Will ear protection devices actually protect my hearing?

Answer. So far, scientific studies seem to prove beyond doubt that faithful wearing of ear protectors by workers exposed to intense noise will prevent additional hearing loss.

3. Question. How can an ear protector conserve my hearing?

Answer. An ear plug or ear muff obstructs the ear canal and reduces the force of the sound waves striking the ear drum. No surgery or medical treatment presently known can restore the nerve tissue. Our only defense is prevention through protection.

4. Question. Is dry cotton in the ear adequate protection for my hearing?

Answer. Contrary to popular opinion, dry cotton affords little or no protection.

5. Question. Is it true that ear protectors are uncomfortable?

Answer. Ear protectors are just like glasses in that a slight adjustment is necessary before you feel at home with them. After wearing protection a few days, most people don't notice them. However, knowing that you are protecting your hearing should justify any temporary discomfort.

6. Question. Can I hear people talk, and can I hear warning signals when I am wearing ear protectors?

Answer. People who regularly wear ear protectors report they hear better in noise. Cutting down the noise level decreases the distortion so speech and warning signals are heard more clearly. This is somewhat similar to the wearing of sun

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glasses, which cuts down excess glare and improves vision. However, workers who already have hearing losses may find difficulty in hearing warning signals. Sometimes another warning device may be substituted for those depending on sound.

7. Question. Since the sound of the machine is a guide to its operation, will I be able to detect whether my machine is running properly if I wear hearing protection?

Answer. Men in power plants and other similar operations tell us you soon become accustomed to the change of the familiar sound, and you still can successfully operate the machine guided by this changed or different sound.

8. Question. How can I tell when my ear protectors are fitted properly?

Answer. If ear protectors are fitted properly, you can usually hear your own voice in a muffled manner, as if you were speaking in a tank or barrel. This is true because you hear yourself differently, as sound waves now will reach the inner ear through a different pathway because sound waves will not be following their usual route. By counting out loud to five, you can test this phenomenon.

To fit properly, protectors must fit snugly. There must be a good seal between the surface of the skin and the surface of the ear protector. Ear protectors must often be reinserted, as they tend to work loose. Frequently different-sized ear plugs will be required for ear canals which vary in diameter. For example, a large plug might be required for the left ear and a small device for the right.

9. Question. How do I keep my ear protectors clean? Will they cause ear infection?

Answer. Careful washing with mild soap and water is all that is necessary. Wash and dry the plugs when you wash your hands. So far, we have not received reports indicating that ear plugs encourage disease or infection.

Use the new film, *Ear Protection in Noise*—color, 9½ minutes, 16 mm., produced by the American Academy of Ophthalmology and Otolaryngology for the Pacific Northwest Pulp and Paper Association, Seattle, Wash. This film, as well as an earlier one titled, *The Ear and Noise,* were produced under the direction of Dr. Aram Glorig, director of research, Subcommittee on Noise, American Academy of Ophthalmology and Otolaryngology, 327 South Alverado Street, Los Angeles.

These films are excellent for supervisors and foremen and bring about an appreciation of the value of our sense of hearing and a desire to conserve it.

When introducing protection instruct employees to use it for short periods to start and gradually work up to longer periods until the protective devices may be worn for a full shift without discomfort.

Keep at it! Keep at it! Keep at it! This is the only way we have dealt with all other protective equipment.

Because ear muffs are now more comfortable and at the same time more economical than when first introduced, their use is growing rapidly. Workers like them, as they eliminate the usual fitting problem as well as loss and subsequent replacement. They are easy to put on

COTTERMAN

WELDED STEEL SAFETY LADDERS

For Filing Rooms—Stock Rooms—Vaults



SAFE
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STRONG
•
EASY TO MOVE
•
EASY TO CLIMB
•
NON-SKID STEPS

Frame work made from heavy gauge 1" diameter round steel furniture tubing, with all joints electrically welded. Mounted on Swivel Brake Casters which allow the ladder to be rolled freely when no one is on it. When you step on the ladder the rubber cushioned legs rest on the floor and prevent rolling.

Made in 13 heights—from 12" 1 Step to 117" 13 Step, and in 4 widths—18", 20", 26" and 32", with and without hand and platform rails.

We also manufacture the

COTTERMAN TRUCK - N - LADDER

A Truck and Ladder combined in a single unit.

Write for Folder No. 56-N for complete information and prices on both these items.

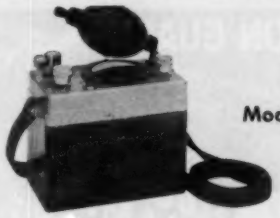
Manufactured by

I. D. COTTERMAN

123 W. Spring Ave. Naperville, Ill.

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Model G



Model H

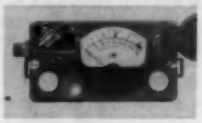


Testing barhole for gas leakage

Two J-W portable gas detectors give reliable, trouble-free service

J-W SNIFFER, Model G, is used for a general-purpose combustible gas detector. Scale is graduated from 0-1.0 l.e.l. (lower explosive limit) for all common gases and vapors. Light in weight (4 lbs.), simple to use and maintain.

J-W GAS-POINTER, Model H is ideal for testing barholes for underground leaks in natural gas lines. Also used for testing manholes, valve boxes, etc. Two scales: 0-1.0 l.e.l. and 0-100% (pure) gas. Exclusive design eliminates electrical switching or zero shift when changing from one range to the other.



Descriptive literature on request.

J-W Johnson-Williams, Inc.

Palo Alto 9, California

Synonymous with safety since 1927

Canadian customers please write:
Safety Supply Co., Toronto, Ont.
Fleck Bros. Ltd., Vancouver, B.C.

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Circle Item No. 225—Reader Service Card



GETS-A-LITE GUARD and GUIDE

Quickly and Easily Installed by Anyone—No Tools Needed!

- **Simply slip GETS-A-LITE GUARD AND GUIDE over the fixture, as illustrated.**
- **Made of indestructible spring steel wire. Nothing to break, get out of order or replace. Will last indefinitely.**
- **Once installed, GETS-A-LITE GUARD AND GUIDE is NEVER removed.**
- **Nothing to unlock, fuss with or lock, when changing lamps.**
- **GETS-A-LITE GUARD AND GUIDE actually steers lamp into socket enabling maintenance man to change lamp in 10 seconds!**
- **Available for 40 watt and 100 watt fluorescent lamps.**

GETS-A-LITE CO.—Dept. NSN-1060
3865 N. Milwaukee Ave., Chicago 41, Ill.



FYRUMBRELLA enables men to stay right up there—no need to be "run out" by roaring heat! No more lurking behind pieces of metal, bed springs, doors, wetted down tarps or blankets.

- Five feet square, when open, the aluminized surface deflects 95% of the radiant heat. The tough **GLASS** cloth construction makes it non-burnable. Three men with 2½" lines and any type nozzles may work through the hose port. Adequate forward vision is provided by eye ports on each side. The **FYRUMBRELLA**, weight only 9½ lbs., folds so compactly that it fits inside a section of 4" suction hose. The **FYRUMBRELLA** combines an aluminized reflective surface on strong, non-burnable glass cloth backed by a coating of neoprene for greater strength. Hardware is of a rugged steel construction to withstand raps and bumps. Write for complete information on Fyrumbrella, other Fyrepel Fire Fighting Equipment and Heat Protective Clothing.

FYREPEL PRODUCTS, INC.
Dept. A Box 503 Newark, Ohio

Circle Item No. 226—Reader Service Card

and take off and are usually hung on a hook by the machine—a constant reminder they are to be worn.

Some workers will object to the bulky appearance of muffs. Explain that looks should not enter into our feeling. Protection of hearing is our goal. Gradually, we will get used to the appearance of ear muffs, just as we have gotten used to hoods, helmets, protection masks, and space suits—all designed to protect us from injury or disease.

Education can do a great deal in shaping proper attitudes, in defeating prejudices, in clearing up misunderstanding, in gaining acceptance of ideas and things. Posters on ear protection and hearing conservation, articles in employee publications, special bulletin board displays, or exhibits will help promote the wearing of ear protectors.

It is always wise to inform employees fully on anything new or different. It is particularly important to give them straight facts on noise and audiometric measurement, and ear protective devices, rather than let them form opinions from hearsay.

A nurse in a foundry which has obtained 100 per cent hearing protection tells us why her program has been successful. "First of all, we had 100 per cent management interest and support. Then we took the time and effort to sincerely explain to each employee why it was so important for him to wear protection at all times while working in the cleaning room. We fitted each man individually, showed him how to insert the device in the ear canal, and lastly, sent a notice signed by the foreman to the man if he forgot or neglected to use his equipment. It didn't take long for them to realize we meant business. Now it is just taken for granted."

The potential cost of hearing loss can be high. Noise is also annoying because it contributes to the discomfort of the worker. Even more important, it can permanently damage the hearing mechanism. The solution is prevention—constantly and effectively applied.

500 Compensation Experts Meet In Canada

The welfare of 48 million workers and their dependents who come under workmen's compensation legislation in the U. S. and Canada was discussed at the 46th annual meeting of the International Association of Industrial Accident Boards and Commissions in Edmonton, Alberta, August 21-25.

The meeting brought together 500 compensation experts from both sides of the border, seeking to improve the status and benefits of workers injured on the job, according to Arthur W. Motley, director of the U. S. Department of Labor's Bureau of Labor Standards and secretary of IAIABC.

To provide realistic financial benefits and adequate medical treatment of workers whose health is impaired as a result of work injuries, conferees examined the extent to which workmen's compensation laws have kept pace with new job hazards and occupational diseases emerging from today's fast-moving industrial developments.

LEWIS SAFETY KNIFE



- **With automatic blade guard. Blade hidden when not in use. Pressure on any surface gives cutting action.**
- **May be carried in pocket safely.**
- **Rust-proof. Unbreakable, die-cast zinc. Bright chrome plated.**
- **Complete with 5 shatterproof blades.**
- **5¾" long.**
- **Weight per dozen, 4 lbs.**
- **Used by Major National Companies and U. S. Government.**

Write today for complete knife catalog.

$1.50 ea. with Belt Holster...1.75
5 Blades . . . 50c

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169 Murray St. • Newark 5, N. J.
Seal-o-matic of Canada, 2 Matilda St., Toronto

Circle Item No. 227—Reader Service Card

NFPA Contest

International competition provides recognition for good fire programs . . . entries due November 30

More than 1,500 cities, industrial firms, military units, and government divisions are expected to participate in the National Fire Protection Association's 1960 Fire Prevention Contest.

The contest, an international competition to provide recognition in the field of fire safety education and performance, is in its 33rd year. Entries last year exceeded all previous totals, according to Percy Bugbee, general manager of the association.

The fire prevention programs to be described in the entries are now in action in hundreds of cities and industrial plants throughout the United States and Canada, as well as at military and government installations. Last year the Montreal Transportation Commission took honors in the industrial division.

The industrial division is open to all industrial firms in the United States and Canada. Entries may be submitted from individual plants or divisions of multi-plant organizations. In evaluating entries, the judges will consider (1) year-round inspections—20 points (2) fire brigade activities—20 points (3) year-round employee fire control education—20 points (4) Fire Prevention Week program—25 points, and (5) results—15 points.

For additional information and entry blanks, write the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass. All entries must be in the NFPA offices by November 30, 1960.

Cycles, Stresses, and Safety

—From page 117

a man's life and seriously injured two others.

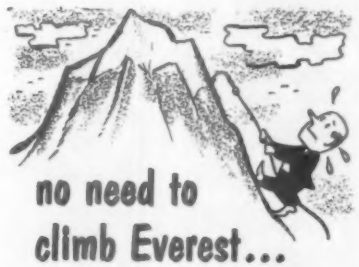
4. *We must strive for continued improvement in management communications skill.*

Communication in recent years has been made the panacea of business success on one hand and the scapegoat of business failures on the other. It also means many things to many people.

For this reason, I want to make it clear that the communication I feel is most important to our safety effort is the face-to-face communication between each supervisory member of management and the employees who report to him.

Every one of us who is a supervisory member of management is responsible for the safety of his employees.

We communicate by our attitude and example whether we are sincerely concerned about safe operation or will settle for an expedient compromise. We set the working climate for our people by our own



no need to climb Everest...

. . . Just send for our latest catalog when you require awards and trophies that are safety stimulators and aid in maintaining a safety program.

This new catalog illustrating thousands of awards and trophies is probably the largest in-stock selection of safety campaign material assembled in a single catalog.

And yes, same day shipment of all trophies selected is standard . . . you see, we are the manufacturers!

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WINTER LINERS

20 styles to fit any Hard Hat



Our Doubleliner

Attention: Wholesale Safety Distributors

Compare our prices and workmanship

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Since 1922, HALCO Industrial-Style First Aid Kits have been installed in thousands of industrial plants. There are now over 20 Standard Combinations available and there's one that would be ideal for your Plant.

All HALCO Kits are made of heavy gauge steel and contain the most modern Surgical Dressings and Medical Supplies.

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RAY-D-8* WARNING FLAGS

- High Visibility
- Wide Range of Sizes
- Diagonal Stays Optional
- Non-Metallic Stay for Indoor Power Plant Use

RAY-D-8* SAFETY VESTS

- *Solid* Panel Front and Back
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RAY-D-8* HARD HAT COVERS

- Fit All Type Hard Hats
- One Size Fits All Hat Sizes

YOU CAN'T BUY MORE PROTECTION FOR HIGHWAY CREWS, SIGNALMEN, CROSSING GUARDS . . . AND ONLY IPCO FEATURES RAY-D-8* FLUORESCENT HIGH VISIBILITY SAFETY EQUIPMENT. IPCO FLAG STANDARDS, WARNING SIGNS, SAFETY CONES AND PLASTIC BARRIER ROPES ALSO GIVE YOU MORE FOR YOUR SAFETY DOLLAR. WRITE FOR COMPLETE INFORMATION . . . *TODAY.*

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INDUSTRIAL PRODUCTS COMPANY

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actions and desires—and by the way these desires are expressed we communicate confidence or we communicate stress.

This is communication in its most subtle, potent form. We can print safety messages in our magazines by the hundreds, but unless we as management actually demonstrate our interest in safety to our employees, safety in our operations will take a secondary position.

Each one of us also plays a key role in the telling and listening functions of communication. We all know that in time of rapid change rumors run rampant. Then people draw wrong conclusions based on inaccurate information, and uneasiness prevails.

To offset these stresses, we must be well informed, confident, articulate, sensitive to the needs of people, and skilled in the art of listening.

This sounds almost too much to ask of a supervisor. But we have had and continue to have examples of such skill. One situation occurred in our company following World War II. We had many places where comparatively young supervisors were given the challenge of working with newly hired employees who had no previous petroleum experience. Here was a situation which had the potential of great stress.

It was surprising and heartwarming, however, to find that in many cases these units established outstanding safety records and their productivity was well above average.

What brought this about? The supervisors explained their success this way. Because their crews were new and inexperienced, it was necessary to work closely with them to explain each step in the job—to answer questions—to designate tools—to describe the process involved—and most important, to instruct in the safety precautions to be taken.

This whole relationship developed habits of good communication between the young foremen and their subordinates—habits of good communication that many of the older, experienced and well established crews had lost somewhere along the line.

And here we should emphasize that this good communication was not based on letters, magazines, or manuals. It resulted from sound, sincere face-to-face communication effort. It produced understanding and confidence.

We have other examples of demonstrated communication skill in our company as, I am sure, you have in yours. But none of us is perfect in this regard. We must work constantly to be more and more effective because communication is the key to real safety progress in times of stress.

And since history clearly shows that accidents increase during down swings in an economic cycle such as our industry is currently experiencing, we recommend four steps for positive counteraction:

First, maintain our support of proper safety programs.

Second, look for the safety implications involved in technological adjustments, reorganizations, personnel moves—in every change we make.

Third, avoid being misled by mythical savings at the expense of safe operations.

Fourth, and in some ways most important, improve management communications skill.

cāba

COMPRESSED AIR BREATHING APPARATUS

For use wherever fumes or gases are present



"CABA" is the newest, most modern in design air breathing apparatus available. Light in weight, CABA is fast and easy to put on or remove. No assistance required. Fits over any clothing and never impedes body movements. Safe and comfortable, CABA provides air supply for up to 30 minutes of continuous use. The dual seamless steel air cylinders are easily recharged by the user.

Send for literature and name of nearest representative.

Designed and Manufactured by

Fluid Power Inc.

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Circle Item No. 232—Reader Service Card

New SAFETY EQUIPMENT



Product announcements in this section are reviewed for compliance with the advertising policy of the NATIONAL SAFETY NEWS. Inclusion should not, however, be construed as endorsement or approval by the National Safety Council.

Acetate Frame Safety Glasses



A line of acetate frame safety glasses has been designed to simplify inventory stock and fit the average employee.

The new frame features a one-size saddle bridge for all three eye sizes, and is available in flesh (Model Y-15) and two-tone brown and crystal (Model T-16). The sculptured saddle bridge construction provides a pressure-free fit.

Shallow-form permanent nose pads combine with the eyewire stock in a continuous flare for a maximum surface-to-face contact to distribute weight evenly.

These frames are not recommended for corrective-protective use. The Y-15 and T-16 are available in three temple styles: acetate spatula, acetate cable and metal spatula. This eyewear features, Bal-Safe lenses in clear or Ray-Ban shades 1, 2, 3, or is available in clear Enduron plastic. Redy-Fit side shields, in clear or green acetate, can be attached for added protection. **Bausch & Lomb Inc., 635 St. Paul St., Rochester 2, N. Y. (Item 301)**

Pre-formed Cable-Laid Slings



Designated as Hi-Pli, a series of ACCO registered preformed cable-laid slings have been introduced. These wire rope slings, designed for applications where ease of handling is important, offer flexibility and non-kinking advantages of hemp rope plus the strength of steel.

Preforming gives these wires the exact shape they assume in the finished rope. Because preformed wire rope is free from internal stress, it is reportedly easy to handle, fast to install and does not loop or kink. It has less tendency to rotate, and it spools without difficulty. Durable under bending conditions, it is safer to handle when worn. It withstands shock loads well. Knots can be tied into these slings without harm.

Coated with galvanized Galacco finish, providing resistance to corrosion, the wire rope slings are furnished dry and clean. They have Duoloc endings. The sling ends are double-locked for greater security. All slings are proof-tested at the factory at twice the load carrying capacity for which it is rated.

Available in 12 different rope diameters of 9/32, ⅜, ½, 9/16, ⅝, ¾, 1, 1⅛, 1 5/16, 1½, 1¾ and 2-in. sizes, the breaking strength ranges from 3-tons for the smallest diameter rope to 113-tons for the 2-in. diameter sling.

American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn. (Item 302)

Equalizer for Fiberglass Ladders



An Equalizer can be ordered built into fiberglass safety ladders. The Equalizer has been field-tested with patents applied for, and is an automatic device that fits into the base of a ladder.

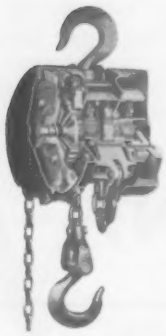
Two base legs adjust themselves vertically (up to a 9½ in. differential) to irregular surfaces, slopes or steps by placing the ladder in position for use. The device then locks automatically when the ladder is stepped on.

This product locks positively at three points where steel bears upon steel. By removing weight from the ladder, the Equalizer legs, with ball and socket non-skid feet, are free to adjust to another contour. The mechanism is sealed in, self-lubricating, and is impervious to dirt and moisture.

The Equalizer is automatic, lightweight and foolproof, and is guaranteed with a 4 to 1 safety factor.

Hopfeld Industrial Mfg. Co. (HIMCO) Box 54, San Francisco, Calif. (Item 303)

Aluminum Hand Hoists



Using aluminum in non-load carrying components to decrease weight, aluminum Safeway hand hoists have been designed for portability.

Lightweight load-bearing parts are of strong, ductile, shock-resistant alloy steel. Aluminum has replaced steel covers, steel hand chain, and other parts such as chain guide and nut.

Self-lubricating, an occasional refilling of the oil reservoir is necessary to lubricate the hoist. Chain and load wheel are lubricated by a wick-type oiler fed from the reservoir, while the gear train is enclosed in a permanently lubricated, oil-tight chamber.

Its planetary system gear train is built from modified involute stub tooth gears, with all gear teeth cut from solid steel blanks. Its load brake, with uniform composition lining and silent pawl, is Weston type.

The hard and wear-resistant ferrous alloy load wheel is reversible and has accurately formed pockets. Electrically welded, the unit's load chain has maximum life consistent with ability to withstand impact. Its load chain guide directs the chain into the load wheel and shrouds the load sheave, protecting parts from falling dust. The bottom block, of nickel, chrome and molyblenum alloy steel contains a rocking and swiveling hook supported on a Timken thrust bearing.

Available in capacities of ½, 1, 1½, 2, 3 and 4-tons, the smallest aluminum Safeway hand hoist weighs 35 lbs. The largest unit weighs 117 lbs.

American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn. (Item 304)

Glove with Reversible Thumb

David's Gloves. Inc. has introduced their "Twin Palm" hot mill glove. The glove has a reversible thumb, safety cuff style, No. 482-2. Free samples are available.

Davids Gloves, Inc., Springfield, Ohio (Item 305)

Universal Bridge For Glasses



"Sell-Fit" is the name of a plastic frame safety glasses line that features a universal bridge design. These glasses are built around a broad continuous bearing surface for the bridge area. There's a choice of broad-styled spatula temples or vinyl coated cable temples.

Lens frames used with this product are molded in S-7 square shape, with styling and frontal eye protection. Frame colors are flesh and charcoal.

In addition to "Sell-Fit" style Model 720, there are side shield versions. Model 720S features perforated plastic side shields hinged to fold back when not in use. Model 720CS offers clear transparent flat-fold side shields built into the temples. All models are available in hardened clear, green absorptive and didymium lenses.

Sellstrom Mfg. Co., 222 South Hicks Road, Palatine, Ill. (Item 306)

Oil-Free Air Compressor



An oil free air compressor is available. Features are long life and ample air volume for Acmes' Zephyrair constant flow compressed air mask equipment.

Weight is 40 lbs. complete.

Provided are inlet filter, 8 ft. of triple wire cord, grounding adaptor, 10a/220v switch, and quick disconnect plug for hose attachment. The carbon vane compressor is driven by a 1/3 hp, 110-v, 60 cycle G.E. motor. A one-year guarantee is offered.

Acme Protection Equip. Co., 1201 Kalamazoo Ave., South Haven, Mich. (Item 307)

Fiberglass Caps, Hats



High-pressure, molded "Vanguard" fiberglass hats and caps combine strength with light weight. Feature nylon suspension of snap-in design with minimum number of pressure points. Suspension automatically centers. Headband adjusts from 6¾ to 7⅝ sizes. Winter liners available. Shell in variety of Colors.

Welsh Mfg. Co., 11 Magnolia St., Providence, R. I. (Item 308)

Portable Extinguisher For Aircraft



A portable fire extinguisher, designed for aircraft use, incorporates a lightweight steel cylinder and trigger-operated aluminum valve. Including a 2-lb. charge of CO_2 the assembly weighs 6½ lb. It is used on Class B and Class C fires.

Other data includes envelope dimensions (inches)—15-1/8 x 9-5/16 x 3-5/8; cylinder capacity—96 cubic in. The cylinder conforms to ICC-3HT-2000 specification, and the extinguisher is approved by Underwriters' Laboratories, Inc.

Walter Kidde & Co., Inc., 145 Main St., Belleville 9, N. J. (Item 309)

Milled Neoprene Protective Glove



Charleston Rubber Company announces its protective glove, "Sensi-Touch," a sensitive, pliable tough addition to the "Neo-Sol" line. The manufacturer says this is the first time a milled neoprene glove with sensitivity has been made available commercially.

This glove has a satin interior finish and is made by the multiple dip cement process. One feature is absence of free sulfur or salts.

"Sensi-Touch" "Neo-Sol" gloves are 10½ in. long and have a single wall measurement of .007 in. to .010 in. for the standard, smooth exterior finish and single wall measurement of .010 in. to .012 in. for the "Grip-Saf" non-slip hand finish. They are available in hand sizes 7, 7½, 8, 8½, 9, 9½, 10 and 11.

Charleston Rubber Co., 16 Stark Industrial Park, Charleston, S. C. (Item 310)

Safety Valve for Portable Extinguisher

An engineered safety valve has been made a standard, integral feature of The Fyr-Fyter Company's 2½ gal. portable foam fire extinguisher, Model 18-4CG.

The valve gives protection to an extinguisher operator. It bleeds off excess internal pressure generated (perhaps due to a discharge line blockage) when the extinguisher is inverted.

New Model 18-4CG is fabricated of lightweight, durable stainless steel. It will, when inverted, produce a 20 gal. foam blanklet to smother and extinguish incipient fires in paint, varnish, tar, grease, other flammable liquids and ordinary combustibles (wood, paper, cloth.) (Also available—same features and design—in drawn brass, Model 18-24CG.)

The Fyr-Fyter Co., 221 Crane St., Dayton 1, Ohio (Item 311)

Drain Can for Flammable Liquids



A drain can for draining flammable liquids from industrial drums, automotive crankcases, and other containers is now available. Top of the Eagle drain can has a large funnel with a wide opening and perforated metal fire baffle to guard against flame or spark igniting the contents.

The top is removed for emptying or cleaning. This product has a seamless body drawn from one-piece 24-gauge steel. The body and breast are electrically welded under electronic control.

The can has a heavy wire handle for carrying. Capacity is three gals.

Eagle Mfg. Co., 1056 Charles St., Wellsburg, W. Va. (Item 312)

Contoured Headpiece For Rescue Suit



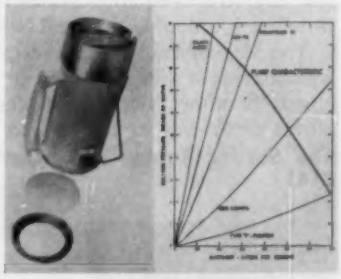
A contoured headpiece for Fire King fire rescue suit has been designed to offer panoramic vision and durability. Double windows are secured by lock-on brackets that make the windows air and watertight and, when necessary, replaceable.

The inner window is of a thick, heat resistant transparent material. The outer window is 3M's gold filmed, heat-resistant plastic. The headpiece is constructed of fiberglas and resists heat, moisture, and impact. It can be used with a detachable head cradle or hard hat.

Soles on the Fire King now offer traction combined with heat resistance. A life line with belt can be fitted to the suit. Short, regular, and long sizes are now obtainable, and a larger size fiber case has been designed for the larger suits.

Wheeler Protective Apparel, Inc., 228 West Huron St., Chicago, Ill. (Item 313)

High Volume Air Sampler



A lightweight, High Volume Air Sampler, developed by the New York office of the Atomic Energy Commission, Health and Safety Laboratory, is now available for industry.

This 3½ lb. sampler, Unico Model No. 300, ran 427 continuous hours using a 4-in. diameter Whatman-41 filter paper. The unit did not overheat. The motor was not damaged. At the end of the continuous run, brushes were replaced and the operation repeated.

The calibration curve shows flow characteristics of the Unico Model No. 300 pump using various types of filter media.

Unico Model No. 300 pump is made of high-impact styrene. The end mounts are machined of aluminum. The filter-holder is a one-piece machined ring. The paper is sealed by an 0-ring attached to the body of the pump. The flow rate is measured by an indirect variable orifice.

Model No. 300 pump is 110-220 volt ac or dc. The filter paper is available with the pump.

Union Industrial Equipment Corp., Port Chester, N. Y. (Item 314)

Easy-Fit Glasses Bridge

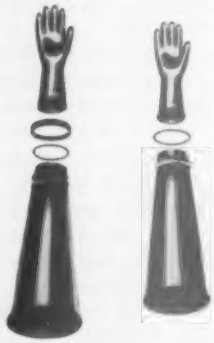


Pulmosan's "Executive" styled safety spectacles have an easy-fit bridge—two eye sizes fit all workers. The frame incorporates low bridge, saddle nosepiece and temples.

These spectacles are available in two colors—black grain and crystal or smoke gray, with or without side shields.

Pulmosan Safety Equip. Corp., 644 Pacific St., Brooklyn 17, N. Y. (Item 315)

"Dry-Box" Gloves



Available in rubber, neoprene and Sureseal, Sure-Lock gloves provide a quick-change, two-part unit for replacement of glove or gloves without disposing of sleeves.

An interlocking ring and groove system enables the operator to change gloves without removing the sleeve from its fastened-on position in the port opening of the "dry box." For applications requiring an air or gas-proof seal, a double ring seal is available.

The sleeves and gloves are made in 27 and 30 in. over-all length with 5 in. or 8 in. I. D. opening. All size gloves fit either sleeve. Thickness can be varied in gloves or sleeves to conform to specific requirements.

The Surety Rubber Co., Carrollton, Ohio (Item 316)

Improved Soundscope

Design improvements in the M-S-A Soundscope, extending its range and flexibility for noise measurement, have been announced. Two alternate microphone systems have been incorporated in a new model—one a condenser microphone extending the sound level range up to 200 db.; the other microphone designed for use under conditions of extreme heat or humidity.

The printed circuit construction of the instrument has been re-designed with the addition of new components. Changes in panel attachment and mechanical design have been made.

This device provides noise survey data in three areas of interest to industrial hygienists, safety engineers, and acoustical specialists. Over-all sound pressures are measured in the range of 24 to 150 db.

For more precise analysis of components throughout the audible spectrum, the instrument provides sound pressure data in each of seven octave bands over a frequency range of 75 cycles to 9600 cycles. Narrow band analysis in the octave can be made to determine the frequency at which peaks of noise are located.

Field calibration of the instrument—electrical and acoustical—is simplified by a built-in oscillator. Portability of the unit permits noise-contour plotting at many different locations.

Mine Safety Appliances Co., 201 N. Braddock Ave., Pittsburgh 8, Pa. (Item 317)

Shield Replaces Green Cross

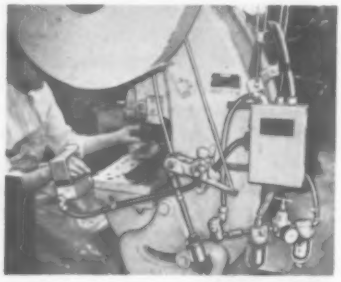


The "Shield of Safety" replaces the "Green Cross for Safety" emblem shown in the Williams Jewelry & Mfg. Co. catalog. For those who have earned a National Safety Council award and wish to supplement this award with additional trophies or plaques, permission can be obtained from National Safety Council for use of the "Green Cross for Safety" emblem.

The "Green Cross for Safety" emblem is still available on individual incentive, safe driver or safety awards.

Williams Jewelry & Mfg. Co., Dept. TS, 10 S. Wabash Ave., Chicago 3, Ill. (Item 318)

Two-Hand Electric Control



An addition to power press controls is a combination two-hand electric control with timer and an automation control.

The control box is used to automate certain stamping and punching operations. Used as a two-hand control, the circuit is designed so both palm buttons must be pushed within a predetermined time.

This feature makes it impossible for the operator to tie one palm button down and trip the machine with the remaining palm button, even for the first stroke.

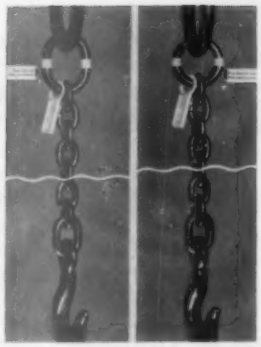
Since palm buttons are plugged into the control box, actuating switches can be attached to certain dies and plugged into the control box in place of the palm buttons.

Each time the operator feeds work into the die, the stock will automatically actuate the switch and trip the press only when it is in the correct position. This avoids spoiled parts and saves operator time and reduces fatigue.

These controls are shipped from the factory wired, including external and internal wiring.

Searjeant Metal Products, Inc., 53 Pittsford Road, Mendon, N. Y. (Item 319)

Sling with Warning Ring



"Sentry Slings," with a warning ring that provides visual evidence of overload, has been introduced.

These slings are equipped with warning rings which distort the moment the sling is overloaded. Though stronger than the chain, the ring gives immediate warning by changing shape before permanent damage to the sling can occur.

When repairs are necessary, they are quickly made, with warning rings replaced at the factory. In most cases, only the ring need be replaced, reducing repair costs.

These slings have been tested for more than a year by foundries, steel fabricators and heavy equipment manufacturers. They are available in all types and are made from Cam-Alloy steel chain.

Campbell Chain Co., York, Pa. (Item 320)

Satin Finish On Smokers



Standard Industrial Products Co., manufacturers of the Sipco Dunking Station line of Safe Smokers, announces all crinkle finished models are now using a smooth satin finish on the canister lids.

This gives a duo-tone appearance. The surface is easier to clean, since cigarette ashes cannot become imbedded in it.

Standard Industrial Prod. Co., 3527 Farmington Rd., Peoria, Ill. (Item 321)

Nylon Safety Straps



"Klein-Kord" nylon safety straps. These are woven from filament nylon, almost elminating stretch. These are flexible to give comfort and strength. When tested in use, they are capable of test load of 2750 lb.

Multiple plies of woven, pre-dipped nylon are frictionized in neoprene and vulcanized. Buckles and snaps are drop-forged by Klein.

Available are No. 5294 "Klein-Kord" nylon safety strap with red cotton center; and No. 5295 "Klein-Kord" all nylon safety strap; both in 6 ft., 6 ft. 6 in., 7 ft. and 8 ft. lengths.

Mathias Klein & Sons, Inc., 7200 McCormick Rd., Chicago 45, Ill. (Item 322)

Streamlined Mike Shield



372-8BM is a lightweight, mike shield that encloses a noise-cancelling, extended-frequency microphone, activated by a push-to-talk button or toggle switch on the outside of the shield.

Adjustable chin straps of nylon hold the shield in position. Ear seals and microphone seals may be removed for cleaning, together with the head pad for replacement.

Commercial airlines have used the 372-8BM Straightway model for jet engine trim testing of 707's, DC8's and Electras. These ear protectors, combining communication with high attenuation, have been used for other applications where noise levels are loud. A military model (372-8CM) is available.

David Clark Co., Inc., 360 Park Avenue, Worcester, Mass. (Item 323)

Pressure-Demand Air-Pak

A pressure-demand Air-Pak provides constant positive pressure in the mask. This eliminates possibility of poisonous gases entering the mask from the outside. Pure fresh filtered air flows to the mask from high-pressure cylinders.

One 300 cu. ft. cylinder supplies air to one man for 6 to 8 hours. Air flows through a small, armored supply hose, available in lengths up to 250 ft.

The safety of the Scott Pressure Demand Air-Pak is independent of wind direction or velocity. Air supply from cylinder to mask is totally enclosed and cannot be contaminated by dirt, dust, smoke or poisonous gases.

Scott Aviation Corp., 211 Erie St., Lancaster, N. Y. (Item 324)

Large Particles In Ice Melter



Large particles of Ice-Foe for deep, long action, have now been added to the small, round particles forming this product. Pen/Ax is blended into Ice-Foe, along with Noxide to prevent rust and corrosion of ferrous metals.

Tests prove Ice-Foe melts snow and ice up to 30 times faster, without leaving a messy residue on sidewalks or driveways. Ice-Foe is non-toxic, and has no ill effect on vegetation, shoes, tires, concrete or blacktop. Ice-Foe is available in 100-lb. drums for industrial use, and in 5, 10, and 25-lb. packages for auto and home use.

Walton-March, P. O. Box 248, 1592 Deerfield Rd., Highland Park, Ill. (Item 325)

Washable Horsehide Work Gloves



Flesh split horsehide leather palm work gloves with washable, dry cleanable cuffs have been introduced. Soft, flexible and comfortable, the horsehide will stand soaking and drying, and should be able to withstand high heat temperatures without shrinking.

Riegel Textile Gloves, 260 Madison Ave., New York 16, N. Y. (Item 326)

Acoustic Panels

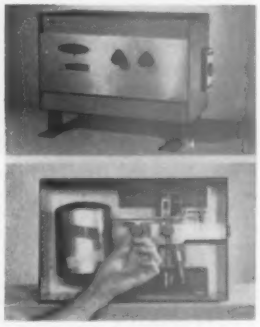


A line of standard acoustic panels can be used as sound barriers and partial enclosures for noise control.

Each panel has connecting joints for noise reduction and is available in cold rolled steel, galvanized steel, and stainless steel.

Industrial Acoustics Co., Inc., 341 Jackson Ave., New York 54, N. Y. (Item 327)

Automatic Monitoring Unit



A new monitoring device continuously, automatically detects changes in air density caused by gas buildups. The Detectogas Monitor operates like a mechanical balance. It has no hot filaments and can safely be installed in hazardous areas. When gas is present the balance trips, closing a secondary alarm circuit through an explosionproof switch.

Detectogas Instrument Inc., 3110 Eastside, Houston 6, Texas (Item 328)

Split Packaging For Aid Kits



"Split-Packs" first aid packaging makes it possible to stock twice the variety of first aid supplies in any kit. Quantities of less frequently used supplies can be purchased in combination with standard items to eliminate spoilage and waste.

With this packaging, conventional unit packs are split, allowing two types of supplies to be packed in one single unit pack. Supplies carried in unit packs are combined to complement each other.

In Bullard's R-111 "Split Pack" a dressing, 2 in. x 2 in. bandage compress, is combined with antiseptic, two 4cc Unidrop merthiolate. The packs are packaged in polyethylene for protection against dust and moisture.

Other "Split-Packs" include 2 in. x 2 in. gauze pads with Hexachlorophene antiseptic soap in Unidrop tubes and burn ointment with ammonia inhalants.

E. D. Bullard Co., 2680 Bridgeway Blvd., Sausalito, Calif. (Item 329)

New Models- Safety Spectacles



Two new models have been added to the Eye Gard "Adapta-Spec" line of safety spectacles. No. 471 "Adapta-Spec" features clear safety lens, spatula temples and partial side shield. The No. 479 has green safety lens, cable temples and perforated side shields.



Made of durable butyrate plastic, the "Adapta - Spec" frame and bridge fit the facial contour of more than 95 per cent of wearers.

American Industrial Safety Equip. Co., 3500 Lakeside Ave., Cleveland 14, Ohio (Item 330)

Winter Liners With Special Fabrics



Winter liners for safety hats and caps include, in addition to models of standard construction, neoprene-coated liners without metal parts for electrical hats and caps, knitted liners for universal use and disposable liners for perspiration absorption and for use as a visitor's sanitary liner.

These liners are of water-repellent, mercerized and sanforized fabrics. They feature heavy gray outer flannels and red knit linings. Chin straps with adjustable snaps enable snug fit in available sizes. For frigid climates liner models are made with an extra urethane insert lining. This liner has a snap-on mouthpiece to give additional face protection against cold winter winds.

Fibre-Metal Prod. Co., 5th & Tilghman Sts., Chester, Pa. (Item 331)

Plastic Glasses For Visitors



Eye protection for visitors to industrial plants is now being produced as a lightweight, all-plastic spectacle. The device offers wide coverage through a shield-like lens which covers both eyes.

Lenses are available in clear or green in a clear crystal frame. Each spectacle is packaged in an individual cellophane envelope.

American Optical Co., Southbridge, Mass. (Item 332)

For More Information—Circle Item Number on Reader Service Postcard

NEWS ITEMS

MSA International



H. E. Redenbaugh

Harry E. Redenbaugh has been named vice-president of MSA International, Division of Mine Safety Appliances Company. Mr. Redenbaugh also retains his present position as manager of MSA International, which he has held since May 1957.

His new responsibilities include supervision of MSA International's Export Department and seven subsidiary companies in Canada, South Africa, Scotland, Mexico, Venezuela, Germany, and Italy.

Mr. Redenbaugh joined MSA in 1941 after graduation from Harvard Graduate School of Business Administration. He has served in the company's industrial sales, government sales, mining sales, and market research departments.

M. Setlow & Son



Gov. Abraham A. Ribicoff of Connecticut recently dedicated the new $200,000 M. Setlow & Son Inc., office and industrial buildings at Orange, Conn. The building has one story and covers 17,000 sq. ft. of area.

Lawter Chemicals Inc.

Lawter Chemicals, Inc., Chicago, manufacturers of Hi-Viz fluorescent safety paint has announced appointment of Safety Supply Company, Toronto, Ont., Canada, to handle their line of high visibility safety paints in Canada.

E. D. Bullard Company will distribute this product in the United States and in foreign markets, excluding Canada.

S. G. Taylor Chain Company

E. W. Taylor, president of S. G. Taylor Chain Company, Inc., Hammond, Ind., has announced the purchase of the Carroll Chain Company equipment for making weldless and stamped chain. Taylor manufactures alloy steel chain and attachments, plus welded, weldless and stamped chain in the Hammond and Pittsburgh plants.

American Optical Co.



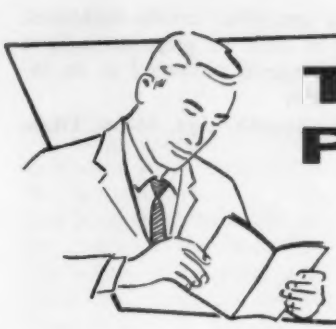
Thomas P. Welch, industrial goggles sales manager at American Optical Company, is shown being congratulated by C. H. Gallaway, vice-president, Safety Division, after receiving a 40-year service award recently. Looking on is J. T. Monahan, sales manager of the Safety Products Division sales force. Mr. Welch was the first member of the Safety Division sales force.

Union Industrial Equipment Corp.



J. S. Penzner

Jerry S. Penzner is now a sales representative for Union Industrial Equipment Corp., Port Chester, N.Y. He will be responsible for the firm's activities in Oklahoma, Kansas and Missouri. Formerly, Mr. Penzner was associated with Adler Communications Labs and was a field engineer for Burndy Corp.



TRADE PUBLICATIONS

These trade publications will keep you up-to-the-minute on new developments in safety equipment and health products. All catalogs are free, and will be sent without obligation. Just circle publication number on the Reader Service Postcard.

Dust Preventive

This bulletin from Maintenance Inc., Wooster, Ohio, describes Radon 401. A liquid treatment for concrete floors—said to penetrate into the surface to bind small particles together and retard breakdown under traffic, thus acting as a deterrent to dust.

For more details circle No. 400 on enclosed return postal card.

Material Handling

Safe, convenient, fast unloading of treated poles and piling from flat cars loaded according to the Signode-Developed AAR figure 24 method is detailed in a folder from the Signode Steel Strapping Co., 2600 N. Western Ave., Chicago 47.

For more details circle No. 401 on enclosed return postal card.

Ice Control

National Asphalt Corp., 2275 Brooklyn Station, Cleveland, Ohio, has information available on its Nacor Melts-It, ice and snow melting chemical pellets. Packaged now in 100, 300, and 500 lb drums for industrial and institutional use.

For more details circle No. 402 on enclosed return postal card.

Emergency Shower and Eye Wash

A 32-page catalog with details on Emergency Eye Wash, Eye-Face Wash, and Drench Shower Equipment manufactured by Haws Drinking Faucet Co., Fourth and Page Streets, Berkeley 10, Calif. All models are covered by specifications and drawings.

For more details circle No. 403 on enclosed return postal card.

Electric Door Opener

This electric door opener, powered by a fractional horsepower gear-motor, is said to require no lubrication, has no compressors, and can be completely dismantled in less than five minutes. Other features include electric slip-clutch braking and two-way opening and closing power. Hopkins Door Opener Co., Philadelphia, Pa.

For more details circle No. 404 on enclosed return postal card.

Respiratory Equipment

Literature is available from Wilson Products Div., Reading, Pa., on their line of respiratory equipment including: lens properties, canister numbers and sizes, laboratory approvals, sizing, fitting, product descriptions. Components, parts, and carrying cases are illustrated.

For more details circle No. 405 on enclosed return postal card.

Commercial Standard for Warm-Air Furnaces

A new edition of the Commercial Standard for Warm-Air Furnaces has been announced by the Commodity Standards Division, Office of Technical Services, Business and Defense Services Administration, U.S. Department of Commerce. Covered are both gravity and forced-air furnaces. Included are definitions, requirements, furnace design and construction, performance, test codes, publication of furnace ratings, labeling, and installation requirements.

For more details circle No. 406 on enclosed return postal card.

Portable Air Sampler

Included in this bulletin from Gelman Instrument Co., 106 North Main Street, Chelsea, Michigan, are details on their battery-operated air sampler with the advantages of a power-line free sampler outlined. Plus a table of filter papers including the primary uses of each type and their composition.

For more details circle No. 407 on enclosed return postal card.

Spark-Resistant Tools

This 4-page bulletin lists and describes the stock numbers and sizes of spark-resistant tools such as wire brushes, hammers, scrapers, pliers, shovels, and wrenches. Covered are the more popular items from the safety tool line of Ampco Metal, Inc., Box 2004, Milwaukee 1, Wis.

For more details circle No. 408 on enclosed return postal card.

Safety Signs

Ready Made Sign Co., Inc., 115 Worth Street, New York 13, announces the publication of their latest catalog of stock signs. Manufactured in accordance with The American Standards Association specifications for industrial accident signs.

For more details circle No. 409 on enclosed return postal card.

Work Glove Guide

A selector manual covering basic types and styles of work gloves is offered to buyers, safety engineers, and purchasing agents. The guide includes information on basic cuts, cuff styles, and other specification detailed for quick reference. It contains tips on grades of leather, chemical resistance, and physical properties of various plastic coatings along with the basic features of flannel, jersey, terry cloth, neoprene, plastic, and rubber coated gloves. Riegel Textile Sales, 260 Madison Ave., New York 16, N.Y.

For more details circle No. 410 on enclosed return postal card.

Cold-Weather Electrical Tape

A vinyl electric tape that is said to strip easily, remain flexible, never freeze, and stick at 20 degrees below zero Fahrenheit is being marketed by Plymouth Rubber Co., Inc., Canton, Mass. Tested under severe conditions, this tape is said to overcome the major objection to the use of vinyl plastic tape; that of freezing, becoming brittle, and losing its adhesive quality at low temperatures.

For more details circle No. 411 on enclosed return postal card.

Bacteriostatic Floor Finish

A self-polishing, skid-resistant floor finish which has residual bacteriostatic properties that fight germs and prevent their regrowth as long as the polish is on the floor. Developed by Puritan Chemical Co., 916 Ashby St., N.W., Atlanta, Georgia for use in hospitals, schools, institutions, and offices.

For more details circle No. 412 on enclosed return postal card.

Fire Extinguishers

M. L. Snyder & Son, Inc., has information on their new dry chemical extinguisher that is said to put out 50 per cent more fire than the 2½ lb. extinguishers now found on the market, while only ¼ lb. heavier. Underwriters has given it a 6-unit rating. An ideal extinguisher for motor boats, trucks, busses, the home, farm, industry, schools, and hospitals. M. L. Snyder & Son., Inc., Jasper & York Streets, Philadelphia 25, Pa.

For more details circle No. 413 on enclosed return postal card.

Scaffolds

No. AS-10 8-page, illustrated bulletin, gives details on aluminum ladders and sectional and folding-type scaffolds. Available 29- and 54-in. wide, and with 6-, 8-, and 10-ft. spans. The Patent Scaffolding Co., Inc., 38-21 12th Street, Long Island City 1, N.Y.

For more details circle No. 414 on enclosed return postal card.

Hand Trucks

Valley Craft Products, Inc., 750 Jefferson, Lake City, Minn., has circulars available describing their line of hand trucks. The circulars feature their Stair Cart. Equipped with a special power drive that rolls it up stairs step-by-step as the operator pulls the drive cable. Two-wheel brakes are incorporated in this truck to allow for better control and safety decending stairs or ramps. These features are said to double the amount of load that can be rolled up steps as compared with ordinary type hand trucks.

For more details circle No. 415 on enclosed return postal card.

Infra-Red Heaters

This 4-page folder contains design data, control arrangements, and advantages of infrared heating. Tables of mounting heights for different models, recommended clearances from combustibles are included. Hupp Corp., 1135 Ivanhoe Rd., Cleveland 10, Ohio.

For more details circle No. 416 on enclosed return postal card.

Floodlights

Bulletin GEA-7201 outlines usefulness of floodlighting loading platforms and other areas. Application and product information on filament, mercury vapor, and fluorescent units are included. General Electric Co., 1 River Road, Schenectady 5, N.Y.

For more details circle No. 417 on enclosed return postal card.

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—feature equipment and services that will help you solve accident problems in your plant. Instead of making a "mental note," make sure you get full information by sending in the card. If no item number appears with an ad, it will be found on the opposite page, next to the arrow. Cover position ads are shown on the cards as: IFC — inside front cover; IBC — inside back cover; BC —back cover.

•

New Safety Equipment

—shown in the special section has been carefully reviewed. Only new products or newsworthy improvements in existing equipment are considered eligible for this section.

•

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—are catalogs, brochures, spec sheets and booklets—a wealth of helpful literature—describing equipment and services that will assist you in comparing before you buy. You can build a valuable safety equipment reference file with these free publications.

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IMPORTANT—Be sure to fill in your name, organization and address in the space provided on this side of the postcard.

National Safety News
October, 1960

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- **the ADVERTISING pages**
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Make sure all the items you want to know more about are circled . . . check to make sure your name, organization, and address are printed on the reverse side of the postcard . . . THEN mail it today.

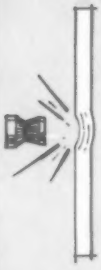
National Safety News
October, 1960

New CESCO MULTI-PLY WINDOWS



pass molten lead and air rifle "torture" tests

Here's dramatic, conclusive proof of resistance to heat and impact like you've never seen in a face shield window before! CESCO's new Multi-Ply windows were subjected to these torture tests with results that speak for themselves...



TEST NO. 1

A .22 cal. air rifle with a muzzle velocity of 450 ft. per sec. was fired at a .045" Multi-Ply window from a distance of 35 feet. Only a small superficial dent resulted. There was no shattering, no penetration. However, the same gun fired from the same distance pierced .032" Aluminum (24ST3) and .040" Cellulose Acetate regularly used for face shield windows.



TEST NO. 2

A ladle containing 6½ lbs. of 635 degree molten lead was poured on a Multi-Ply window for 45 seconds. Though the hot lead was poured on the same spot, none of it penetrated the window. Under identical circumstances a .040" acetate window melted in 9 seconds after only ⅛ lb. of lead was poured.

• Heretofore the only way to be assured of increased resistance to heat and impact was to buy a window of increased thickness. But now CESCO Multi-Ply offers you vastly superior protection in one low-priced, volume-produced window—just .045" thick. Multi-Ply is available in CESCO's six basic face shields—featuring fiber glass crowns and shells—new G-3 Nylanite headgear. Readily interchangeable with hard hats, the G-3 has a broad pivoting cross band adjustable for height and an offset cambered rear headband that's the last word in comfort.

CESCO

Write for free booklet giving prices and full details about Multi-Ply windows

CESCO FOR SAFETY

CHICAGO EYE SHIELD COMPANY • 2705 West Roscoe Street, Chicago 18, Illinois

Circle Item No. IBC—Reader Service Card

NEW AO SURE-GUARD PRODUCTS
for Quality Eye, Respiratory, Body and Hand Protection



DURASAFE
"New Milestone in Eye Protection"
See insert in this issue
(Cat. No. F9800)



COVERGLAS GOGGLE
Fits practically all workers. Simplifies lens stocks because lenses measure 50 mm. rd. — the standard type in most goggles. Increased ventilation. Frames are cellulose acetate, opaque brown. Adjustable leather bridge standard. Chipper's model illustrated. (Cat. No. 325)



VISITOR'S GOGGLE
Eye accidents to plant visitors can be costly and embarrassing. Welcome guests with this low cost, comfortable, optically correct goggle. Fits over personal glasses. .020" acetate lens, crystal spatula temples. (Cat. No. F790)



FLEXIFIT GOGGLE
Simplifies fitting of plano spectacles — has saddle-bridge. New wire mesh side shields offer increased ventilation for comfort on hot jobs and humid weather. Mahogany or pink crystal frame. (Cat. No. F9600)



METALLIC VAPOR RESPIRATOR
Provides protection against metallic mercury vapors, organic vapors, dusts and mists. R88 Cartridges used in this respirator offer 8 to 9 times the service life of similar units. (Cat. No. R5088)



BLAZE ORANGE CLOTHING & SAF-T-GLO GLOVES
Both offer high visibility for police plant guards and others. Clothing consists of police coat, poncho and cap cover. Lightweight, nylon coated, won't crack or peel. Gloves are a phosphorescent vivid orange color for signaling safety. Liquid proof, positive grip on oily, greasy objects. Knitwrist model shown.



THERMOGARB CLOTHING
Lightweight coated asbestos for molten splash protection. 42½ minutes close exposure to 3000°F molten splash failed to penetrate or burn through the material. Available in a full line of body protection.



MULTI-HAZARD RESPIRATOR
For pneumoconiosis-producing dusts, toxic dusts, pneumoconiosis-producing mists, chromic acid mist, metal fumes, organic vapors and metallic mercury vapors or combinations of these hazards simultaneously. One of our R5000 interchangeable series. (Cat. No. R5089)

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